

# TRITON STUDIO V2 MIDI IMPLEMENTATION

TRITON STUDIO MIDI IMPLEMENTATION

Version 2.0 (May.13.'03)

Consult your local Korg dealer for more information on MIDI System Exclusive implementation.

## 1. TRANSMITTED DATA

### 1-1 CHANNEL MESSAGES

[H] :Hex, [D] :Decimal

Status	Second	Third	Description ( Transmitted by .... )		ENA
[Hex]	[H] [D]	[H] [D]			
8n	kk (kk)	40 (64)	Note Off	( Key Off )	*1 A
9n	kk (kk)	vv (vv)	Note On (vv)=1-127	( Key On )	*1 A
An	kk (kk)	vv (vv)	Poly Key Pressure	( Seq.data )	T,Q
Bn	00 (00)	mm (mm)	Bank Select(MSB)	( BANK keys, Prog/Combi change )	*2 PB
Bn	01 (01)	vv (vv)	Modulation1	( Joy Stick +Y )	C
Bn	02 (02)	vv (vv)	Modulation2	( Joy Stick -Y )	C
Bn	04 (04)	vv (vv)	Foot Pedal	( A.Pdl = Foot Pedal )	C
Bn	05 (05)	vv (vv)	Portamento Time	( A.Pdl/Knob-B = Porta.Time,S Chg )	C
Bn	06 (06)	vv (vv)	Data Entry (MSB)	( ARP ON/OFF, GATE, VELOCITY )	*3 C
Bn	07 (07)	vv (vv)	Volume	( A.Pdl/Knob-B = Volume, S/C Chg )	C
Bn	08 (08)	vv (vv)	Post IFX Panpot	( A.Pdl/Knob-B = PostIFXPan,S Chg )	C
Bn	0A (10)	vv (vv)	Panpot	( A.Pdl/Knob-B = Pan,S Chg )	C
Bn	0B (11)	vv (vv)	Expression	( A.Pdl/Knob-B = Expression )	C
Bn	0C (12)	vv (vv)	Effect Control 1	( A.Pdl/Knob-B = FX Control1 )	C
Bn	0D (13)	vv (vv)	Effect Control 2	( A.Pdl/Knob-B = FX Control2 )	C
Bn	10 (16)	vv (vv)	Multi Purpose Ctrl1	( Ribbon Controller )	C
Bn	11 (17)	vv (vv)	Multi Purpose Ctrl2	( Knob-B = Knob Mod1 )	C
Bn	12 (18)	vv (vv)	Multi Purpose Ctrl3	( Value Slider )	C
Bn	13 (19)	vv (vv)	Multi Purpose Ctrl4	( Knob-B = Knob Mod2 )	C
Bn	14 (20)	vv (vv)		( Knob-B = Knob Mod3 )	C
Bn	15 (21)	vv (vv)		( Knob-B = Knob Mod4 )	C
Bn	20 (32)	bb (bb)	Bank Select(LSB)	( BANK keys, Prog/Combi change )	*2 PB
Bn	40 (64)	vv (vv)	Hold1	( Damper )	C
Bn	41 (65)	00/7F (00/127)	Portamento Off/On	( SW1/SW2/A.SW = Porta.SW, S Chg )	C
Bn	42 (66)	00/7F (00/127)	Sostenuto Off/On	( A.SW = Sostenuto )	C
Bn	43 (67)	vv (vv)	Soft Pedal	( A.SW = Soft )	C
Bn	46 (70)	vv (vv)	Sound Controller 1	( Knob-B = F/A Sustain )	C
Bn	47 (71)	vv (vv)	Sound Controller 2	( Knob-2A, Knob-B = Resonance/HPF )	C
Bn	48 (72)	vv (vv)	Sound Controller 3	( Knob-4A, Knob-B = F/A Release )	C
Bn	49 (73)	vv (vv)	Sound Controller 4	( Knob-B = F/A Attack )	C
Bn	4A (74)	vv (vv)	Sound Controller 5	( Knob-1A, Knob-B = LPF Cutoff )	C
Bn	4B (75)	vv (vv)	Sound Controller 6	( Knob-B = F/A Decay )	C
Bn	4C (76)	vv (vv)	Sound Controller 7	( Knob-B = Pitch LFO1 Spd )	C
Bn	4D (77)	vv (vv)	Sound Controller 8	( Knob-B = Pitch LFO1 Dep )	C
Bn	4E (78)	vv (vv)	Sound Controller 9	( Knob-B = Pitch LFO1 Dly )	C
Bn	4F (79)	vv (vv)	Sound Controller 10	( Knob-3A, Knob-B = Filter EG Int )	C
Bn	50 (80)	00/7F (00/127)	Multi Purpose Ctrl15	( SW1/Knob-B = SW1 Mod. )	C
Bn	51 (81)	00/7F (00/127)	Multi Purpose Ctrl16	( SW2/Knob-B = SW2 Mod. )	C
Bn	52 (82)	00/7F (00/127)	Multi Purpose Ctrl17	( A.SW/Knob-B = Foot SW )	C
Bn	53 (83)	vv (vv)	Multi Purpose Ctrl18	( Knob-B = CC#83 )	C
Bn	5B (91)	vv (vv)	Effect 1 Depth	( A.Pdl/Knob-B = MFX Send2, S Chg )	C
Bg	5C (92)	00/7F (00/127)	Effect 2 Depth	( All Insert FX Off/On )	C
Bn	5D (93)	vv (vv)	Effect 3 Depth	( A.Pdl/Knob-B = MFX Send1, S Chg )	C
Bg	5E (94)	00/7F (00/127)	Effect 4 Depth	( Master FX1 Off/On )	C
Bg	5F (95)	00/7F (00/127)	Effect 5 Depth	( Master FX2 Off/On )	C
Bn	cc (cc)	vv (vv)	Control (cc)=0-95	( Knob-B = MIDI CC#00-95 )	C
Bn	62 (98)	ss (ss)	NRPN Param No.(LSB)	( ARP ON/OFF, GATE, VELOCITY )	*3 C
Bn	63 (99)	tt (tt)	NRPN Param No.(MSB)	( ARP ON/OFF, GATE, VELOCITY )	*3 C
Bn	cc (cc)	vv (vv)	Control (cc)=0-101	( Seq. data )	Q
Cn	pp (pp)	-- --	Program Change	( Prog/Combi change )	*2 P
Dn	vv (vv)	-- --	Channel Pressure	( After Touch )	T
En	bb (bb)	bb (bb)	Bender Change	( Joy Stick X	C

A.Pdl : Assignable Pedal

A.SW : Assignable Switch

S Chg : Transmitted when change a Song No.(Seq. mode). (Track's Status = EXT,EX2,BTH)

C/S Chg : Transmitted when change a Combination or Song No.(Seq. mode). (Track's Status = EXT,EX2,BTH)

n : MIDI Channel No. (0 - 15) ..... Usually Global Channel.

When in Combination/Sequencer/Song Play mode, each timbre's/track's channel.(Status = EXT,EX2 or BTH)

g : Always Global Channel No. (0 - 15)

ENA = A : Always Enabled

C : Enabled when Enable Control Change in Global mode is checked

P : Enabled when Enable Program Change in Global mode is checked

PB: Enabled when Enable Program and Bank Change in Global mode is checked

T : Enabled when Enable After Touch in Global mode is checked

Q : Enabled when Sequencer is playing(transmit), recording(receive)

\*1 : kk = 24 - 108 : TRITON STUDIO 61 (61keys + Transpose)

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= 16 - 115 : TRITON STUDIO 76 (76keys + Transpose)
= 09 - 120 : TRITON STUDIO 88 (88keys + Transpose)
= 00 - 127 : Sequencer and Arpeggiator
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\*3 : ARPEGGIATOR ON/OFF : [ Bn,63,00,Bn,62,02,Bn,06,mm] mm = 00(Off),7F(On)  
 ARPEGGIATOR GATE Knob : [ Bn,63,00,Bn,62,0A,Bn,06,mm] mm = 00-7F  
 ARPEGGIATOR VELOCITY Knob : [ Bn,63,00,Bn,62,0B,Bn,06,mm] mm = 00-7F

1-2 SYSTEM COMMON MESSAGES				[H] :Hex, [D] :Decimal
Status [Hex]	Second [H] [D]	Third [H] [D]	Description ( Transmitted when )	
F2	ss (ss)	tt (tt)	Song Position Pointer ss : Least significant [LSB] *4 tt : Most significant [MSB] *4	
F3	ss (ss)		Song Select (Song or Cue List is selected) ss : Song(0-127)/Cue List(0-19) No.	

Transmits Song Position Pointer message when in Sequencer and Song Play mode (Internal Clock)  
Transmits Song Select message when in Sequencer mode (Internal Clock)

\*4 : For example, if time signature is 4/4 or 8/8, tt,ss = 00,10 means one measure.

Status[Hex]	Description ( Transmitted when ... )
F8	Timing Clock ( Always in Prog/Combi/Seq/Song Play mode ) *
FA	Start ( START in Seq/Song Play mode ) *
FB	Continue ( Continue START in Seq/Song Play mode ) *
FC	Stop ( STOP in Seq/Song Play mode ) *
FE	Active Sensing ( Always )

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1-4-2 UNIVERSAL SYSTEM EXCLUSIVE MESSAGES ( REALTIME )
    Master Volume
    [ F0,7F,0g,04,01,vv,mm,F7 ]

    3rd byte   g : Global Channel
    6th byte   vv : Value(LSB)
    7th byte   mm : Value(MSB)
               mm,vv = 00,00 - 7F,7F : Min - Max

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## 2.RECOGNIZED RECEIVE DATA

## 2-1 CHANNEL MESSAGES

[H] :Hex, [D] :Decimal

Status [Hex]	Second [H] [D]	Third [H] [D]	Description ( Use ..... )	ENA
8n	kk (kk)	xx (xx)	Note Off	A
9n	kk (kk)	00 (00)	Note Off	A
9n	kk (kk)	vv (vv)	Note On (vv)=1-127	A
An	kk (kk)	vv (vv)	Poly Key Pressure ( as AMS )	T
Bn	00 (00)	mm (mm)	Bank Select(MSB) ( for Prog/Combi change )	*1 PB
Bn	01 (01)	vv (vv)	Modulation1 ( as Joy Stick +Y )	C
Bn	02 (02)	vv (vv)	Modulation2 ( as Joy Stick -Y )	C
Bn	04 (04)	vv (vv)	Foot Pedal ( as AMS & FX Dmod Src =Pedal )	C
Bn	05 (05)	vv (vv)	Portamento Time	C
Bn	06 (06)	vv (vv)	Data Entry (MSB) ( for RPC edit )	C
Bn	07 (07)	vv (vv)	Volume	C
Bn	08 (08)	vv (vv)	Balance Control ( for Post IFX Panpot control )	*2 C
Bn	0A (10)	vv (vv)	Panpot	C
Bn	0B (11)	vv (vv)	Expression	C
Bn	0C (12)	vv (vv)	Effect Control 1 ( as FX Dmod Src = FX1 )	C
Bn	0D (13)	vv (vv)	Effect Control 2 ( as FX Dmod Src = FX2 )	C
Bn	10 (16)	vv (vv)	Multi Purpose Ctrl1 ( as Ribbon Controller )	C
Bn	11 (17)	vv (vv)	Multi Purpose Ctrl2 ( as AMS & FX Dmod Src =KnobMod1 )	C
Bn	12 (18)	vv (vv)	Multi Purpose Ctrl3 ( as Value Slider )	C
Bn	13 (19)	vv (vv)	Multi Purpose Ctrl4 ( as AMS & FX Dmod Src =KnobMod2 )	C
Bn	14 (20)	vv (vv)	( as AMS & FX Dmod Src =KnobMod3 )	C
Bn	15 (21)	vv (vv)	( as AMS & FX Dmod Src =KnobMod4 )	C
Bn	20 (32)	bb (bb)	Bank Select(LSB) ( for Prog / Combi change )	*1 PB
Bn	26 (38)	vv (vv)	Data Entry (LSB) ( for RPC edit )	C
Bn	40 (64)	vv (vv)	Hold1 ( as Damper)	C
Bn	41 (65)	dd (dd)	Portamento Off/On	*3 C
Bn	42 (66)	dd (dd)	Sostenuto Off/On	*3 C
Bn	43 (67)	vv (vv)	Soft Pedal	C
Bn	46 (70)	vv (vv)	Sound Controller 1 ( for Sustain Level control )	C
Bn	47 (71)	vv (vv)	Sound Controller 2 ( for Resonance/HPF Cutoff ctrl)	C
Bn	48 (72)	vv (vv)	Sound Controller 3 ( for Release Time control )	C
Bn	49 (73)	vv (vv)	Sound Controller 4 ( for Attack Time control )	C
Bn	4A (74)	vv (vv)	Sound Controller 5 ( for LPF Cutoff control )	C
Bn	4B (75)	vv (vv)	Sound Controller 6 ( for Decay Time control )	C
Bn	4C (76)	vv (vv)	Sound Controller 7 ( for LFO1 Speed control )	C
Bn	4D (77)	vv (vv)	Sound Controller 8 ( for LFO1 Pitch Depth control )	C
Bn	4E (78)	vv (vv)	Sound Controller 9 ( for LFO1 Delay control )	C
Bn	4F (79)	vv (vv)	Sound Controller 10 ( for Filter EG Intensity ctrl )	C
Bn	50 (80)	vv (vv)	Multi Purpose Ctrl5 ( as AMS & FX Dmod Src =SW 1 )	C
Bn	51 (81)	vv (vv)	Multi Purpose Ctrl6 ( as AMS & FX Dmod Src =SW 2 )	C
Bn	52 (82)	vv (vv)	Multi Purpose Ctrl7 ( as AMS & FX Dmod Src =Foot SW )	C
Bn	53 (83)	vv (vv)	Multi Purpose Ctrl8 ( as AMS & FX Dmod Src = CC#83 )	C
Bn	5B (91)	vv (vv)	Effect 1 Depth ( for Send 2 Level control )	C
Bg	5C (92)	ee (ee)	Effect 2 Depth ( for All Insert FX Off/On )	*4 C
Bn	5D (93)	vv (vv)	Effect 3 Depth ( for Send 1 Level control )	C
Bg	5E (94)	ee (ee)	Effect 4 Depth ( for Master FX1 Off/On )	*4 C
Bg	5F (95)	ee (ee)	Effect 5 Depth ( for Master FX2 Off/On )	*4 C
Bn	60 (96)	00 (00)	Data Increment ( for RPC edit )	C
Bn	61 (97)	00 (00)	Data Decrement ( for RPC edit )	C
Bn	62 (98)	ss (ss)	NRPN Param No.(LSB) ( for NRPN select )	*5 C
Bn	63 (99)	tt (tt)	NRPN Param No.(MSB) ( for NRPN select )	*5 C
Bn	64 (100)	0r (0r)	RPN Param No. (LSB) ( for RPN select )	*6 C
Bn	65 (101)	00 (00)	RPN Param No. (MSB) ( for RPN select )	*6 C
Bn	cc (cc)	vv (vv)	Control data ( for Seq. recording (cc)=0-101 )	C,Q
Bn	78 (120)	00 (00)	All Sound Off	C
Bn	79 (121)	00 (00)	Reset All Controllers	C
Bn	7A (122)	00/7F (00/127)	Local Control Off/On	A
Bn	7B (123)	00 (00)	All Notes Off	A
Bn	7C (124)	00 (00)	Omni Mode Off ( as All Notes Off )	A
Bn	7D (125)	00 (00)	Omni Mode On ( as All Notes Off )	A
Bn	7E (126)	00 - 10 (00 - 16)	Mono Mode On ( as All Notes Off )	A
Bn	7F (127)	00 (00)	Poly mode On ( as All Notes Off )	A
Cn	pp (pp)	-- --	Program Change ( for Prog/Combi change )	*1 P
Dn	vv (vv)	-- --	Channel Pressure ( as After Touch )	T
En	bb (bb)	bb (bb)	Bender Change	C

AMS : Alternate Modulation Source

FX Dmod Src: Effect Dynamic Modulation Source

n : MIDI Channel No. ( 0 - 15 ) ..... Usually Global Channel.

When in Combination/Sequencer/Song Play mode, each timbre's/track's channel.(Status is INT or BTH)

g : Always Global Channel No. ( 0 - 15 )

x : Random

ENA : Same as Transmitted data

\*1 : When Bank Map in Global mode is KORG;

MIDI In [Hex]	Program	Combination
mm,bb,pp = 00,00,	00 - 7F : Bank INT-A	000 - 127 : Bank INT-A 000 - 127
00,01,	00 - 7F : INT-B	000 - 127 : INT-B 000 - 127
00,02,	00 - 7F : INT-C	000 - 127 : INT-C 000 - 127
00,03,	00 - 7F : INT-D	000 - 127 : INT-D 000 - 127
00,04,	00 - 7F : INT-E	000 - 127 : INT-E 000 - 127
00,05,	00 - 7F : INT-F	000 - 127
00,08,	00 - 7F : EXB-A	000 - 127 : EXB-A 000 - 127
00,09,	00 - 7F : EXB-B	000 - 127 : EXB-B 000 - 127
00,0A,	00 - 7F : EXB-C	000 - 127 : EXB-C 000 - 127
00,0B,	00 - 7F : EXB-D	000 - 127 : EXB-D 000 - 127
00,0C,	00 - 7F : EXB-E	000 - 127 : EXB-E 000 - 127
00,0D,	00 - 7F : EXB-F	000 - 127 : EXB-F 000 - 127
00,0E,	00 - 7F : EXB-G	000 - 127 : EXB-G 000 - 127
79,00,	00 - 7F : G	001 - 128
79,01-09,	00 - 7F : g(1)-g(9)	001 - 128
78,00,	00 - 7F : g(d)	001 - 128
38,00,	00 - 7F : G	001 - 128
3E,00,	00 - 7F : g(d)	001 - 128

When Bank Map in Global mode is GM(2);

MIDI In [Hex]	Program	Combination
mm,bb,pp = 3F,00,	00 - 7F : Bank INT-A	000 - 127 : Bank INT-A 000 - 127
3F,01,	00 - 7F : INT-B	000 - 127 : INT-B 000 - 127
3F,02,	00 - 7F : INT-C	000 - 127 : INT-C 000 - 127
3F,03,	00 - 7F : INT-D	000 - 127 : INT-D 000 - 127
3F,04,	00 - 7F : INT-E	000 - 127 : INT-E 000 - 127
3F,05,	00 - 7F : INT-F	000 - 127
3F,08,	00 - 7F : EXB-A	000 - 127 : EXB-A 000 - 127
3F,09,	00 - 7F : EXB-B	000 - 127 : EXB-B 000 - 127
3F,0A,	00 - 7F : EXB-C	000 - 127 : EXB-C 000 - 127
3F,0B,	00 - 7F : EXB-D	000 - 127 : EXB-D 000 - 127
3F,0C,	00 - 7F : EXB-E	000 - 127 : EXB-E 000 - 127
3F,0D,	00 - 7F : EXB-F	000 - 127 : EXB-F 000 - 127
3F,0E,	00 - 7F : EXB-G	000 - 127 : EXB-G 000 - 127
79,00,	00 - 7F : G	001 - 128
79,01-09,	00 - 7F : g(1)-g(9)	001 - 128
78,00,	00 - 7F : g(d)	001 - 128
00,00,	00 - 7F : G	001 - 128
38,00,	00 - 7F : G	001 - 128
3E,00,	00 - 7F : g(d)	001 - 128
3F,7F,	00 - 7F : Mute (KORG MUTE)	
(XG) 00,01 -	:	Assign correspond program in G, g(1) - g(9)
(GS) 01,00 -	:	Assign correspond program in G, g(1) - g(9)

\*2 : When in Program/Sampling mode, Global channel

When in Combination/Sequencer/Song Play mode, each IFX's channel.

\*3 : dd = 00 - 3F : Off  
40 - 7F : On

\*4 : ee = 00 : Off  
01 - 7F : On

\*5 : tt,ss = 00,02 : Arpeggiator Off/On  
= 00,0A : Arpeggiator Gate control  
= 00,0B : Arpeggiator Velocity control

When in Program/Combination mode, Global channel message is valid.

When in Sequencer/Song Play mode, Control Track's channel message is valid.

Data Entry LSB value has no effect.

tt,ss = 01,08 : Vibrato Rate  
tt,ss = 01,09 : Vibrato Depth  
tt,ss = 01,0A : Vibrato Delay  
tt,ss = 01,20 : Filter Cutoff  
tt,ss = 01,21 : Filter Resonance  
tt,ss = 01,63 : EG Attack Time  
tt,ss = 01,64 : EG Decay Time  
tt,ss = 01,66 : EG Release Time  
tt,ss = 14,kk : Drum Filter Cutoff \*  
tt,ss = 15,kk : Drum Filter Resonance \*  
tt,ss = 16,kk : Drum EG Attack Time \*

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tt,ss = 17,kk : Drum EG Decay Time      *
tt,ss = 18,kk : Drum Coarse Tune        *
tt,ss = 19,kk : Drum Fine Tune          *
tt,ss = 1A,kk : Drum Volume              *
tt,ss = 1C,kk : Drum Panpot              *
tt,ss = 1D,kk : Drum Rev Send(Send2)    *
tt,ss = 1E,kk : Drum Cho Send(Send1)    *

```

\* Only valid when Part Mode is Drum, MDrml - Mdrml4.

kk: Drum Inst No. (0C - 6C = C0 - C8)

Data Entry LSB value has no effect.

\*6 : r = 0 : Pitch Bend Sensitivity ( Bend Range ).

```
= 1 : Fine Tune      ( Detune )
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= 2 : Coarse Tune      ( Transpose )
```

For drum program, both of Fine Tune and Coarse Tune affect to Detune.

Data Entry LSB value has no effect for Pitch Bend Sensitivity and Coarse Tune.

## 2-2 SYSTEM COMMON MESSAGES

[H] :Hex, [D] :Decimal

Status [Hex]	Second [H] [D]	Third [H] [D]	Description ( Use for ..... )
F2	ss (ss)	tt (tt)	Song Position Pointer ( Location ) ss : Least significant [LSB] tt : Most significant [MSB]
F3	ss (ss)		Song Select (Song or Cue List select) ss : Song(0-127)/Cue List(0-19) No.

Receive when in Sequencer mode (External Clock)

\*7 : When in the Cue List page (Sequencer mode Pl), these respond to Location and No. of Cue List.

## 2-3 SYSTEM REALTIME MESSAGES

Status[Hex]	Description ( Use for..... )	
F8	Timing Clock ( Tempo, AMS. & FX Dmod Src )	*8
FA	Start ( Seq Start & Arpeggiator Control )	*8
FB	Continue ( Seq Continue start & Arpeggiator Control )	*8
FC	Stop ( Seq Stop & Arpeggiator Control )	*8
FE	Active Sensing ( MIDI Connect check )	

\*8 : Receive when MIDI Clock in Global mode is External MIDI or External mLAN.

## 2-4 SYSTEM EXCLUSIVE

## 2-4-1 UNIVERSAL SYSTEM EXCLUSIVE MESSAGE ( NON REALTIME )

DEVICE INQUIRY ( When received this message, transmits INQUIRY MESSAGE REPLY )

```
[ F0,7E,nm,06,01,F7 ]      3rd byte nm : Channel = 0 - F : Global Channel  
                                = 7F       : Any Channel
```

GM System On ( Receive when in Song Play mode )

3rd byte nn : Channel = 0 - F : Global Channel  
= 7F : Any Channel

## 2-4-2 UNIVERSAL SYSTEM EXCLUSIVE MESSAGES ( REALTIME )

Master Volume

```

[ F0,7F,0g,04,01,vv,mm,F7 ]
3rd byte  g : Global Channel
6th byte  vv : Value(LSB)
7th byte  mm : Value(MSB)
mm.vv = 00,00 - 7F,7F : Min - Max

```

Master Balance

```
[ F0,7F,0g,04,02,vv,mm,F7 ]
```

```
3rd byte  g : Global Channel
6th byte  vv : Value(LSB)
7th byte  mm : Value(MSB)
          mm,vv = 00,00:Left, 40,00:Center, 7F,7F:Right
```

Master Fine Tune ( Control Master Tune(cent) in Global )

```

[ F0,7F,0g,04,03,vv,mm,F7 ]
3rd byte   g : Global Channel
6th byte   vv : Value(LSB)
7th byte   mm : Value(MSB)
mm,vv = 20,00:-50, 40,00:+00, 60,00:+50

```

Master Coarse Tune ( Control Transpose (chromatic step) in Global )

```

[ F0,7F,0g,04,04,vv,mm,F7 ]
3rd byte   g : Global Channel
6th byte   vv : Value(LSB)
7th byte   mm : Value(MSB)
mm,vv = 34,00:-12, 40,00:+00, 4C,00:+12

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# TRITON STUDIO V2 MIDI IMPLEMENTATION

## 3.KORG System Exclusive Message Received Function Code List (5th byte of Exclusive message) List

Func	Description
12	MODE REQUEST
10	CURRENT PROGRAM PARAMETER DUMP REQUEST
1C	PROGRAM PARAMETER DUMP REQUEST
19	CURRENT COMBINATION PARAMETER DUMP REQUEST
1D	COMBINATION PARAMETER DUMP REQUEST
18	SEQUENCE DATA DUMP REQUEST
0E	GLOBAL DATA DUMP REQUEST
0D	DRUMKIT DATA DUMP REQUEST
34	ARPEGGIO PATTERN DATA DUMP REQUEST
0F	ALL DATA(PROG,COMBI,GLOBAL,DRUMS,ARPPAT,SEQ)DUMP REQUEST
11	PROGRAM WRITE REQUEST
1A	COMBINATION WRITE REQUEST
40	CURRENT PROGRAM PARAMETER DUMP
4C	PROGRAM PARAMETER DUMP
49	CURRENT COMBINATION PARAMETER DUMP
4D	COMBINATION PARAMETER DUMP
48	SEQUENCE DATA DUMP
51	GLOBAL DATA DUMP
52	DRUMKIT DATA DUMP
69	ARPEGGIO PATTERN DATA DUMP
50	ALL DATA(PROG,COMBI,GLOBAL,DRUMS,ARPPAT,SEQ)DUMP
4E	MODE CHANGE
41	PARAMETER CHANGE
53	DRUMKIT PARAMETER CHANGE
6D	ARPEGGIO PATTERN PARAMETER CHANGE
6E	SYSTEM V2 NOTIFY
6F	SYSTEM V2 EXTENDED SEQUENCE DATA DUMP

(1) MODE REQUEST R  
 F0, 42, 3g, 50      Excl Header  
 12                    Function  
 F7                    End of Excl  
 (Receives this message, and transmits Func=42 message)

(2) CURRENT PROGRAM PARAMETER DUMP REQUEST R  
 F0, 42, 3b, 50      Excl Header  
 10                    Function  
 00                    Reserved  
 F7                    End of Excl  
 (Receives this message, and transmits Func=40 or Func=24 message)

(3) PROGRAM PARAMETER DUMP REQUEST R  
 F0, 42, 3g, 50      Excl Header  
 1C                    Function  
 00kk bbbb           Kind and Bank    (\*1)  
 0ppp pppp           Program No.  
 00                    Reserved  
 F7                    End of Excl  
 (Receives this message, and transmits Func=4C or Func=24 message)

(4) CURRENT COMBINATION PARAMETER DUMP REQUEST R  
 F0, 42, 3g, 50      Excl Header  
 19                    Function  
 00                    Reserved  
 F7                    End of Excl  
 (Receives this message, and transmits Func=49 or Func=24 message)

(5) COMBINATION PARAMETER DUMP REQUEST R  
 F0, 42, 3g, 50      Excl Header  
 1D                    Function  
 00kk bbbb           Kind and Bank    (\*2)  
 0ccc cccc           Combination No.  
 00                    Reserved  
 F7                    End of Excl  
 (Receives this message, and transmits Func=4D or Func=24 message)

(6) SEQUENCE DATA (In Memory) DUMP REQUEST R

## TRITON STUDIO V2 MIDI IMPLEMENTATION

F0, 42, 3g, 50	Excl Header
18	Function
00	Reserved
F7	End of Excl

(Receives this message, and transmits Func=48 or Func=24 message)

```
(7) GLOBAL DATA DUMP REQUEST                                     R
    F0, 42, 3g, 50      Excl Header
    0E                  Function
    0000 000k           Kind(k = 0 : size is same as TRITON, 1 : TRITON STUDIO)
    F7                  End of Excl
(Receives this message, and transmits Func=51 or Func=24 message)
```

```

(8) DRUMKIT DATA (In Memory) DUMP REQUEST
    F0, 42, 3g, 50      Excl Header
    0D                  Function
    0000 00kk           Kind          (*3-1)
    0ddd dddd           Drumkit No.   (*3-1)
    00                  Reserved
    F7                  End of Excl
(Receives this message, and transmits Func=52 or Func=24 message)

```

```

(9) ARPEGGIO PATTERN DATA DUMP REQUEST
      F0, 42, 3g, 50      Excl Header
      34                  Function
      0kk0 0000            Kind          (*3-2)
      0000 00aa            ARPPAT No. MSB (*3-2)
      0aaa aaaa            ARPPAT No. LSB (*3-2)
      F7                  End of Excl
(Receives this message, and transmits Func=69 or Func=24 message)

```

```
(10) ALL DATA(PROG,COMBI,GLOBAL,DRUMS,ARPPAT,SEQ)DUMP REQUEST      R
      F0, 42, 3g, 50      Excl Header      (*10)
      0F      Function
      0000 000k      Kind(k = 0 : For TRITON, 1 : For TRITON STUDIO)
      F7      End of Excl
(Receives this message, and transmits Func=50 or Func=24 message)
```

```

(11) PROGRAM WRITE REQUEST                                     R
      F0, 42, 3g, 50      Excl Header
      11                  Function
      0000 bbbb           Write Program Bank          (*4)
      0ppp pppp           Write Program No.
      F7                  End of Excl
(Receives this message, write the data and transmits Func=21 or Func=22 message)

```

(12)	COMBINATION WRITE REQUEST		R
	F0, 42, 3g, 50	Excl Header	
	1A	Function	
	0000 bbbb	Write Combination Bank	(*4)
	0ccc cccc	Write Combination No.	
	F7	End of Excl	
(Receives this message, write the data and transmits Func=21 or Func=22 message)			

```

(13) CURRENT PROGRAM PARAMETER DUMP                                     R , T
      F0, 42, 3g, 50           Excl Header
      40                       Function
      0000 000t                Program Type (t = 0 : PCM, 1 : MOSS)
      0ddd dddd                Data (*5,*6, TABLE1,2)
      F7                       End of Excl

(Receives this message & data, and transmits Func=23 or Func=24 message)
Receives Func=10 message, and transmits this message & data.
When the Prog No. is changed by SW, transmits this message & data.

```

```

(14) PROGRAM PARAMETER DUMP                                     R , T
      F0, 42, 3g, 50      Excl Header
      4C                  Function
      0000 00vv           Available Bank                      (*7)
      00kk bbbb           Kind and Bank                      (*7)
      0ppp pppp           Program No.
      0ddd dddd           Data                                (*5,*8, TABLE1,2)
      F7                  End of Excl
(Receives this message & data, and transmits Func=23 or Func=24 message)
Receives Func=1C message, and transmits this message & data.

```

Transmits this message & data when DATA DUMP is executed.

(15) CURRENT COMBINATION PARAMETER DUMP R , T

F0, 42, 3g, 50	Excl Header	
49	Function	
00	Reserved	
0ddd dddd	Data	(*5,*9, TABLE3)
F7	End of Excl	

(Receives this message & data, and transmits Func=23 or Func=24 message)

Receives Func=19 message, and transmits this message & data.

When the Combi No. is changed by SW, transmits this message & data.

(16) COMBINATION PARAMETER DUMP R , T

F0, 42, 3g, 50	Excl Header	
4D	Function	
00	Reserved	
00kk bbbb	Kind and Bank	(*10)
0ppp pppp	Combination No.	
0ddd dddd	Data	(*5,*11, TABLE3)
F7	End of Excl	

(Receives this message & data, and transmits Func=23 or Func=24 message)

Receives Func=1C message, and transmits this message & data.

Transmits this message & data when DATA DUMP is executed.

(17) SEQUENCE DATA (In Memory) DUMP R , T

F0, 42, 3g, 50	Excl Header	
48	Function	
00	Reserved	
0sss ssss	Seq. data Size	[4Bytes] (*12-1)
:	:	
0mmmm mmmmm	Song Data Address	(*5,*12-2, TABLE10)
:	:	
0ccc cccc	CueLists Data	(*5,*12-3, TABLE11)
:	:	
0ddd dddd	Sequence Data	(*5,*12-4, TABLE12)
F7	End of Excl	

(Receives this message & data, and transmits Func=23 or Func=24 message)

Receives Func=18 message, and transmits this message & data.

Transmits this message & data when DATA DUMP is executed.

(18) GLOBAL DATA DUMP R , T

F0, 42, 3g, 50	Excl Header	
51	Function	
0000 000k	Kind(k = 0 : size is same as TRITON, 1 : TRITON STUDIO)	
0ddd dddd	Data	(*5,*13, TABLE4)
:	:	
F7	End of Excl	

(Receives this message & data, and transmits Func=23 or Func=24 message)

Receives Func=0E message, and transmits this message & data.

Transmits this message & data when DATA DUMP is executed.

(19) DRUMKIT DATA DUMP R , T

F0, 42, 3g, 50	Excl Header	
52	Function	
0000 00kk	Kind	(*14-1)
0ddd dddd	Drumkit No.	(*14-1)
00	Reserved	
0ddd dddd	Data	(*5,*15, TABLE7)
:	:	
F7	End of Excl	

(Receives this message & data, and transmits Func=23 or Func=24 message)

Receives Func=0E message, and transmits this message & data.

Transmits this message & data when DATA DUMP is executed.

(20) ARPEGGIO PATTERN DATA DUMP R , T

F0, 42, 3g, 50	Excl Header	
69	Function	
0kk0 0000	Kind	(*14-2)
0000 00aa	ARPPAT No. MSB	(*14-2)
0aaa aaaa	ARPPAT No. LSB	(*14-2)
0ddd dddd	Data	(*5,*14, TABLE8)
:	:	
F7	End of Excl	

(Receives this message & data, and transmits Func=23 or Func=24 message)

Receives Func=34 message, and transmits this message & data.

Transmits this message & data when DATA DUMP is executed.



(21) ALL DATA (PROG,COMBI,GLOBAL,DRUMS,ARPPAT,SEQ) DUMP R , T

F0, 42, 3g, 50	Excl Header	
50	Function	
0000 00vv	Available Bank	(*16)
00	Reserved	
0sss ssss	Seq. data Size [4Bytes]	(*12-1)
:	:	
0ddd dddd	Data	(*5,*17, TABLE1,2,3,4,7,8,10,11,12)
F7	End of Excl	

(Receives this message & data, and transmits Func=23 or Func=24 message)

Receives Func=0F message, and transmits this message & data.

Transmits this message & data when DATA DUMP is executed.

(22) MODE CHANGE R , T

F0, 42, 3g, 50	Excl Header	
4E	Function	
0000 mmmm	Mode	(*18)
F7	End of Excl	

(Receives this message & data, changes the Mode, and transmits Func=23 or Func=24

When the Mode is changed by SW, transmits this message & data.

(23) PARAMETER CHANGE R , T

F0, 42, 3g, 50	Excl Header	
41	Function	
0000 mmmm	Mode	(*18)
0000 0000	Parameter ID (MSB)	
0ppp pppp	Parameter ID (LSB)	(TABLE 1,2,3,5,6,9)
0000 0000	Parameter SUB ID (MSB)	
0qqq qqqq	Parameter SUB ID (LSB)	(TABLE 1,2,3,5,6,9)
0vvv vvvv	Value (MSB bit7~18)	(*19)
0vvv vvvv	Value (LSB bit0~6)	(*19)
F7	End of Excl	

(Receives this message & data, and transmits Func=23 or Func=24 messages)

When the Parameter No. is changed by SW, transmits this message & data.

(24) DRUMKIT PARAMETER CHANGE R , T

F0, 42, 3g, 50	Excl Header	
53	Function	
0kkk kkkk	Drumkit No.	(kk = 00-8F ( : 00-143 with MSB))
0sss ssss	Index No.	(ss = 00-7F ( : C-1-G9))
0000 000k	MSB of Drumkit No.	(TABLE 7)
0ppp pppp	Parameter No.(LSB)	(TABLE 7)
0vvv vvvv	Value (MSB bit7~18)	(*19)
0vvv vvvv	Value (LSB bit0~6)	(*19)
F7	End of Excl	

(Receives this message & data, and transmits Func=23 or Func=24 messages)

(25) ARPEGGIO PATTERN PARAMETER CHANGE R , T

F0, 42, 3g, 50	Excl Header	
6D	Function	
0000 000b	Arpeggio AorB	b = 0 : Arpeggio A 1 : Arpeggio B
0000 00aa	Pattern No. MSB (bit 8-7)	
0aaa aaaa	Pattern No. LSB (bit 6-0)	a = 000-1FA ( : 000-506)
0sss ssss	Step No.	ss = 00-2F ( : 00-47)
0ttt tttt	Tone No.	tt = 00-0B ( : 00-11)
0000 0000	Parameter No. (MSB)	(TABLE 8)
0ppp pppp	Parameter No. (LSB)	(TABLE 8)
0vvv vvvv	Value (MSB bit7~18)	(*19)
0vvv vvvv	Value (LSB bit0~6)	(*19)
F7	End of Excl	

(Receives this message & data, and transmits Func=23 or Func=24 messages)

(26) MODE DATA T

F0, 42, 3g, 50	Excl Header	
42	Function	
0000 mmmm	Mode	(*18)
0ooo oooo	Option	(*20)
0sss ssss	Setuped data1	(*20)
0ddd dddd	Setuped data2	(*20)
00	Reserved	
F7	End of Excl	

(Receives FUNC=12 message, and transmits this message & data.)

(27) MIDI IN DATA FORMAT ERROR T

```

F0, 42, 3g, 50      Excl Header
26                  MIDI IN DATA FORMAT ERROR
0ccc cccc           Error Code                (*21)
F7                  End of Excl
(Transmits this message when there is an error in the MIDI IN message (ex.data length).)

```

```

(28) DATA LOAD COMPLETED (ACK)                                T
F0, 42, 3g, 50      Excl Header
23                  DATA LOAD COMPLETED
F7                  End of Excl
(Transmits this message when DATA LOAD,PROCESSING have been completed.)

```

```

(29) DATA LOAD ERROR (NAC)                                    T
F0, 42, 3g, 50      Excl Header
24                  DATA LOAD ERROR
0ccc cccc           Error Code                (*22)
F7                  End of Excl
(Transmits this message when DATA LOAD,PROCESSING have not been completed (ex. protected).)

```

```

(30) WRITE COMPLETED                                          T
F0, 42, 3g, 50      Excl Header
21                  WRITE COMPLETED
F7                  End of Excl
(Transmits this message when DATA WRITE MIDI have been completed.)

```

```

(31) WRITE ERROR                                              T
F0, 42, 3g, 50      Excl Header
22                  WRITE ERROR
0ccc cccc           Error Code                (*23)
F7                  End of Excl
(Transmits this message when DATA WRITE MIDI have not been completed.)

```

```

(32) SYSTEM V2 NOTIFY                                          R , T
F0, 42, 3g, 50      Excl Header
6E                  Function
00                  Reserved
01                  Reserved
F7                  End of Excl
Receives this message, the system expects receiving SEQUENCE DATA DUMP or ALL DATA DUMP
firstly, and receiving continuously SYSTEM V2 EXTENDED SEQUENCE DATA DUMP secondly.
Transmits this message & data firstly when SEQUENCE or ALL DATA DUMP is executed.

```

```

(33) SYSTEM V2 EXTENDED SEQUENCE DATA (In Memory) DUMP        R , T
F0, 42, 3g, 50      Excl Header
6F                  Function
00                  Reserved
0sss ssss           Seq. data Size [4Bytes] (*24-1)
:                  :
0ddd dddd           Extended Sequence Data and Exclusive Event Data
                        (*5,*24-2 TABLE13 TABLE14)
F7                  End of Excl
(Receives this message & data, and transmits Func=23 or Func=24 message)
Receives Func=18 or Func=0F message, and transmits this message & data after transmitting
SYSTEM V2 NOTIFY and secondly SEQUENCE DATA DUMP or ALL DATA DUMP.
Transmits this message & data when SEQUENCE DATA DUMP or ALL DATA DUMP is executed.

```

```

//////// * The each bank's value is same as value of the internal bank
*1

```

```

k = 0 : Dump Program Bank IA~IE(IF) (size is same as TRITON)
1 : 1 Bank Programs (Use b)
2 : 1 Program (Use b & pp)
3 : TRITON STUDIO All Program Bank IA~IE(IF)/EA~EG

b = 0 - 4 : Bank INT A-E
5 : Bank INT F
6 - 12 : Bank EXB A-G

```

```

*2
k = 0 : Dump Combination Bank IA~ID (size is same as TRITON)
1 : 1 Bank Combinations (Use b)
2 : 1 Combination (Use b & cc)
3 : TRITON STUDIO All Combination Bank IA~IE/EA~EG

b = 0 - 4 : Bank INT A-E

```

5 - 11 : Bank EXB A-G

\*3

3-1

k = 00 : All Drumkits[0-63] (For TRITON)  
 01 : 1 Drumkit (Use d)  
 10 : All Drumkits[0-143](For TRITON STUDIO/TRITON-Rack)

d = 0-8F : Drumkit 0-143

3-2

k = 00 : All Arpeggio Patterns[0-231](For TRITON)  
 10 : 1 Arpeggio Pattern (Use a)  
 01 : All Arpeggio Patterns[0-327](For TRITON-Rack)  
 11 : All Arpeggio Patterns[0-506](For TRITON STUDIO)

a = 0-1FA : Arpeggio Pattern 0-506

\*4 PROGRAM,COMBINATION BANK

b = 0 - 4 : Bank INT A-E  
 5 : Bank INT F(Only for Program)  
 6 - 12 : Bank EXB A-G

\*5 DATA CONVERT METHOD(INTERNAL DATA<-->MIDI DATA)

-----+-----	
Internal 7byte data <--convert--> MIDI 8 byte data	
example) Internal data(bit image)	MIDI data(bit image)
Aaaaaaaa	0GFEDCBA
Bbbbbbbb	0aaaaaaa
Cccccccc	0bbbbbbb
Dddddddd	0ccccccc
Eeeeeeee	0ddddddd
Ffffffff	0eeeeeee
Gggggggg	0fffffff
Hhhhhhhh	0ggggggg
Iiiiiiii	0NMLKJIH
:	0hhhhhhh
:	:
Vvvvvvvv	000000WV
Wwwwwwww	0vvvvvvv
	0wwwwwww
	11110111 (EOX=F7H)
-----+-----	

\*6 PROGRAM PARAMETER (IN CURRENT BUFFER) DUMP FORMAT

\*PCM  
 \*MOSS

\*7

v = 0 : Bank TRITON A~E(No MOSS Synthesizer)  
 1 : Bank TRITON A~F(MOSS Synthesizer is loaded)  
 2 : Bank TRITON STUDIO IA~IE/EA~EG(No MOSS Synthesizer)  
 3 : Bank TRITON STUDIO IA~IF/EA~EG(MOSS Synthesizer is loaded)

k = 0 : Dump Program Bank IA~IE(IF) (size is same as TRITON)  
 1 : 1 Bank Program (Use v & b)  
 2 : 1 Program (Use b & pp)  
 3 : TRITON STUDIO All Program Bank IA~IE(IF)/EA~EG

b = 0 - 5 : Bank INT A-F  
 6 - 12 : Bank EXB A-G

\*8 PROGRAM PARAMETER (IN INTERNAL MEMORY) DUMP FORMAT

\*9 COMBINATION PARAMETER (IN CURRENT BUFFER) DUMP FORMAT

\*10

k = 0 : Dump Combination Bank IA~ID (size is same as TRITON)  
 1 : 1 Bank Combination (Use b)  
 2 : 1 Combination (Use b & cc)  
 3 : TRITON STUDIO All Combination Bank IA~IE/EA~EG

b = 0 - 4 : Bank INT A-E  
 5 - 11 : Bank EXB A-G

\*11 COMBINATION PARAMETER (IN INTERNAL MEMORY) DUMP FORMAT

\*12 SEQUENCE DATA'S OFFSET,SIZE,ADDRESS FORMAT

12-1 : Sequence Data Size (4Bytes)  
 'Seq Data Size' is a all song data's length. A unit is Byte.  
 [Data Size (bit21~27)],  
 [Data Size (bit14~20)],  
 [Data Size (bit 7~13)],

```

        [Data Size (bit 0~ 6)]
        'All song data' is 'SEQ DATA PARAMETERS(TABLE 10)', 'CUE LISTS DATA(TABLE 11)' and
        'SEQ DATA(TABLE 12)'.

```

```

12-2 : Song Data Address

```

```

12-3 : CueLists Data

```

```

12-4 : Sequence Data

```

```

*13 GLOBAL DATA (IN INTERNAL MEMORY) DUMP FORMAT

```

```

*14 ARPEGGIO PATTERN DATA (IN INTERNAL MEMORY) DUMP FORMAT

```

```

*14

```

```

    14-1

```

```

        k = 00 : All Drumkits[0-63] (For TRITON)
            01 : 1 Drumkit          (Use d)
            10 : All Drumkits[0-143](For TRITON STUDIO/TRITON-Rack)

```

```

        d = 0-8F : Drumkit 0-143

```

```

    14-2

```

```

        k = 00 : All Arpeggio Patterns[0-231](For TRITON)
            10 : 1 Arpeggio Pattern      (Use a)
            01 : All Arpeggio Patterns[0-327](For TRITON-Rack)
            11 : All Arpeggio Patterns[0-506](For TRITON STUDIO)

```

```

        a = 0-1FA : Arpeggio Pattern 0-506

```

```

*15 DRUMS DATA (IN INTERNAL MEMORY) DUMP FORMAT

```

```

*16

```

```

        Program
        v = 0 : Bank TRITON A~E(No MOSS Synthesizer)
            1 : Bank TRITON A~F(MOSS Synthesizer is loaded)
            2 : Bank TRITON STUDIO IA~IE/EA~EG(No MOSS Synthesizer)
            3 : Bank TRITON STUDIO IA~IF/EA~EG(MOSS Synthesizer is loaded)

```

```

*17 All DATA (PROG,COMBI,GLOBAL,DRUMS,ARPPAT,SEQ) DUMP FORMAT

```

```

    [Global Data],
    [Drums Data],
    [Arpeggio Pattern DATA],
    [All Combination Parameter Data],
    [All Program Parameter Data],
    [Song Data Address],
    [CueLists Data],
    [Sequence Data]

```

```

*18

```

```

    mmm = 0 : COMBI PLAY
            1 : COMBI EDIT
            2 : PROG PLAY
            3 : PROG EDIT
            4 : SEQUENCER
            5 : SONGPLAY
            6 : SAMPLING
            7 : GLOBAL
            8 : DISK

```

```

*19 VALUE DATA FORMAT (Use at PARAMETER CHANGE, DRUM KIT PARAMETER CHANGE)

```

```

    Bit15-13 of Value Data is the Sign Flag, and each bit has the same value
    Value Data  SSSHHHHH LLLLLLLL (S=Sign H,L=13bit data)
    MIDI Data   OSHHHHHL 0LLLLLLL

```

```

*20

```

```

    oo : bit 0   = 0 : No MOSS Synthesizer,      = 1 : MOSS Synthesizer is loaded

    ss : bit 0,1 = 0 : Note Receive is EVEN,      = 1 : ODD,          = 2 : ALL
          bit 3,4 = 0 : Seq Clock is internal,    = 1 : External    = 2 : External

```

```

mLAN

```

```

    dd : bit 0   = 0 : Prog Mem is not protected, = 1 : protected
          bit 1   = 0 : Combi Mem is not protected, = 1 : protected
          bit 2   = 0 : Seq Mem is not protected,  = 1 : protected
          bit 3   = 0 : Drums Mem is not protected, = 1 : protected
          bit 4   = 0 : ArpPat Mem is not protected, = 1 : protected

```

```

*21

```

```

    cc = 0 : Received Data Length is wrong
          1 : Received Function code is not registered
          40 : Another type error

```

\*22

cc = 0 : Dest Memory is protected  
 1 : Dest Bank/Prog/Param is not exist  
 2 : The mode is wrong  
 3 : Memory over flow  
 40 : Another type error

\*23

cc = 0 : Dest Memory is protected  
 1 : Dest Bank/Prog is not exist  
 2 : The mode is wrong  
 40 : Another type error

\*24 SYSTEM V2 EXTENDED SEQUENCE DATA'S OFFSET,SIZE,ADDRESS FORMAT

24-1 : Extended Sequence Data Size (4Bytes)

'Data Size' is a all song extended data's length. A unit is Byte.

[Data Size (bit21~27)],

[Data Size (bit14~20)],

[Data Size (bit 7~13)],

[Data Size (bit 0~ 6)]

24-2 : Extended Sequence Data and Exclusive Event Data

In INTERNAL DATA, there are

[ TABLE 13 ] 1 SONG EXTENDED SEQUENCE DATA(484Bytes) times VALID SONG in [ TABLE 10 ],

and [ TABLE 14 ] SONG EXCLUSIVE EVENT DATA continuously.

Converting thoes to MIDI DATA in \*5 DATA CONVERT METHOD.

[ TABLE 1 ] PROGRAM PARAMETERS (for PCM Synth)

2002.01.30

No. : No. in the PROGRAM DUMP DATA.

PARA No. : Parameter ID &amp; SUB ID [Hex] for PARAMETER CHANGE.

Left side of ',' is Parameter ID, and right side is SUB ID.

No. (bit)	PARAMETER	DATA(Hex) : VALUE	DESCRIPTION	PARA No.
00 : 15	PROGRAM NAME (Head) : PROGRAM NAME (Tail)	20~~7F		----
INSERT EFFECT 1 PARAMETERS				
16 : 31	Insert Effect 1 Parameter Structure (16Bytes) (See midifx.txt.)			1F,?? : 1F,??
32	Effect Type	00~~59 , 00:No Effect ~ 89:Reverb - Gate		1E,00
b0~~b5	( Reserved )			----
33 b6	ON/OFF	0:Off, 1:ON		1E,05
b7	CHAIN	0:Not chain, 1:Chain		1E,1E
34	( Reserved )			----
35	( Reserved )			----
36	PAN	00~~7F : L000~~R127		1E,0A
37	BUS Select	00:L/R, 01~~04:1~~4, 05:1/2, 06:3/4, 07:Off		1E,0F
38	Send 1 Level	00~~7F : 00~~127		1E,14
39	Send 2 Level	00~~7F : 00~~127		1E,19
INSERT EFFECT 2 PARAMETERS				
40 : 55	Insert Effect 2 Parameter Structure (16Bytes) (See midifx.txt.)			20,?? : 20,??
56	Effect Type	00~~66 , 00:No Effect ~ 102:Hold Delay		1E,01
57 : 63	INSERT EFFECT 2 PARAMETERS ( Same as INSERT EFFECT 1 (33 ~ 39) 7 Bytes) SID : SID of 'INSERT EFFECT 1' + 1			1E,06 : 1E,1F
INSERT EFFECT 3 PARAMETERS				
64 :	Insert Effect 3 Parameter Structure (16Bytes)			21,?? :

## TRITON STUDIO V2 MIDI IMPLEMENTATION

79	(See midifx.txt.)		21,??
80	Effect Type	00~~66 , 00:No Effect ~~ 102:Hold Delay	1E,02
81	INSERT EFFECT 3 PARAMETERS		1E,07
:	( Same as INSERT EFFECT 1 (33 ~~ 39) 7 Bytes)		:
87	SID : SID of 'INSERT EFFECT 1' + 2		1E,20
INSERT EFFECT 4 PARAMETERS			
88	Insert Effect 4 Parameter Structure (16Bytes)		22,??
:	(See midifx.txt.)		:
103			22,??
104	Effect Type	00~~66 , 00:No Effect ~~ 102:Hold Delay	1E,03
105	INSERT EFFECT 4 PARAMETERS		1E,08
:	( Same as INSERT EFFECT 1 (33 ~~ 39) 7 Bytes)		:
111	SID : SID of 'INSERT EFFECT 1' + 3		1E,21
INSERT EFFECT 5 PARAMETERS			
112	Insert Effect 5 Parameter Structure (16Bytes)		23,??
:	(See midifx.txt.)		:
127			23,??
128	INSERT EFFECT 5 PARAMETERS		1E,04
:	( Same as INSERT EFFECT 1 (32 ~~ 39) 8 Bytes except 'CHAIN' parameter)		:
135	SID : SID of 'INSERT EFFECT 1' + 4		1E,1D
MASTER EFFECT PARAMETERS			
136	MFX1 Effect Parameter Structure (16Bytes)		25,??
:	(See midifx.txt.)		:
151			25,??
152	MFX1 Effect Type	00~~59 , 00:No Effect ~~ 89:Reverb - Gate	24,00
b0~~b5	( Reserved )		----
153	b6	MFX1 ON/OFF 0:Off, 1:ON	24,02
b7	( Reserved )		----
154	( Reserved )		----
155	( Reserved )		----
156	MFX2 Effect Parameter Structure (16Bytes)		26,??
:	(See midifx.txt.)		:
171			26,??
172	MFX2 Effect Type	00~~59 , 00:No Effect ~~ 89:Reverb - Gate	24,01
b0~~b5	( Reserved )		----
173	b6	MFX2 ON/OFF 0:Off, 1:ON	24,03
b7	( Reserved )		----
174	( Reserved )		----
175	( Reserved )		----
176	MFX1 Return Level	00~~7F : 00~~127	24,04
177	MFX2 Return Level	00~~7F : 00~~127	24,05
b0~~b1	MFX Chain Signal	0:LR Mix, 1:L Only, 2:R Only	24,08
178	b2	MFX Chain Direction 0:MFX1 -> MFX2, 1:MFX2 -> MFX1	24,07
b3	MFX Chain ON/OFF	0:Chain Off, 1:On	24,06
179	MFX Chain Level	00~~7F : 00~~127	24,09
180	Master EQ Low Gain	EE~~12 : -18.0~~+18.0dB (0.5dB step)	27,00
181	Master EQ Mid Gain	EE~~12 : -18.0~~+18.0dB (0.5dB step)	27,01
182	Master EQ High Gain	EE~~12 : -18.0~~+18.0dB (0.5dB step)	27,02

## TRITON STUDIO V2 MIDI IMPLEMENTATION

183		Master EQ Low Fc	00~~31 , 0:20Hz ~~ 49:1.00kHz		27,03
184		Master EQ Mid Fc	00~~61 , 0:300Hz ~~ 97:10.00kHz		27,04
185		Master EQ High Fc	00~~C3 , 0:500Hz ~~ 195:20.00kHz		27,05
186		Master EQ Mid Q	00~~5F , 0:0.5 ~~ 95:10.0 (0.1 step)		27,06
187		Master EQ Low DMod	00~~1F : Off~Tempo(See '*1' in midifx.txt)		27,07
188		Master EQ High DMod	00~~1F : Off~Tempo(See '*1' in midifx.txt)		27,08
189		( Reserved )			----
190		Arp.Gate Control			----
191		Arp.Velocity Control			----
ARPEGGIATOR PARAMETERS					
192		TEMPO	28~~F0 : 40~~240		1C,00
193		SWITCH	0:OFF, 1:ON		1C,01
194		PATTERN NO.	00~~1FF : 0~~511	0~~1FF : 0~~511      **1-8	1D,00
195	b0~~1	OCTAVE	00~~03 : 0~~4		1D,02
	b2~~4	RESOLUTION	0:16T, 1:16, 2:8T, 3:8, 4:4T, 5:4		1D,01
	b5	PATTERN NO. MSB	0 or 1	0~~1FF : 0~~511      **1-8	1D,00
196		GATE	00~~64 : 0~~100[%], 65:Step		1D,03
197		VELOCITY	01~~7F : 1~~127, 80:Key, 81:Step		1D,04
198		SWING	9C~~64 : -100~~100		1D,05
199	bit0	SORT	0:OFF, 1:ON		1D,06
	bit1	LATCH	0:OFF, 1:ON		1D,07
	bit2	KEY SYNC.	0:OFF, 1:ON		1D,08
	bit3	KEYBOARD	0:OFF, 1:ON		1D,09
200		TOP KEY	00~~7F : C-1~~G9		1D,0A
201		BOTTOM KEY	00~~7F : C-1~~G9		1D,0B
202		TOP VELOCITY	01~~7F : 1~~127		1D,0C
203		BOTTOM VELOCITY	01~~7F : 1~~127		1D,0D
COMMON PARAMETERS					
204	b0~~1	OSCILLATOR MODE	0:Single, 1:Double, 2:Drums		00,01
	bit2	KEY ASSIGN	0:Poly, 1:Mono		00,02
	bit3	LEGATO	0:OFF, 1:ON		00,03
	b4~~5	PRIORITY	0:Low, 1:High, 2:Last		00,04
	bit6	SINGLE TRIGGER	0:OFF, 1:ON		00,05
	bit7	HOLD	0:OFF, 1:ON		00,06
205	b0~~6	BUS SELECT	00:L/R,01~~05:IFX1~~5,06~~09:1~~4,0A:1/2,0B:3/4,0C:Off		00,07
	bit7	USE DKIT SETTING	0:OFF, 1:ON		00,08
206		CATEGORY	00~~0F : 0~~15		00,00
207		SCALE TYPE	00~~1A :	**1-1	00,09
208		SCALE KEY	00~~0C : C~~B		00,0A
209		RANDOM INTENSITY	00~~07 : 0~~7		00,0B
	b0~~5	SW 1 ASSIGN TYPE	00~~0C :	**1-2	00,0C

## TRITON STUDIO V2 MIDI IMPLEMENTATION

210	bit6	SW1 TOGGLE/MOMENTARY	0:Toggle, 1:Momentary		00,10
	bit7	SW 1 ON/OFF	0:OFF, 1:ON		00,1E
	b0~~5	SW 2 ASSIGN TYPE	00~~0C : **1-2		00,0D
211	bit6	SW2 TOGGLE/MOMENTARY	0:Toggle, 1:Momentary		00,11
	bit7	SW 2 ON/OFF	0:OFF, 1:ON		00,0F
	b0~~6	KNOB 1 ASSIGN TYPE	00~~7C : **1-3		00,12
212	bit7	REALTIME CONTROLS	0:A, 1:B		00,16
213		KNOB 2 ASSIGN	00~~7C : **1-3		00,13
214		KNOB 3 ASSIGN	00~~7C : **1-3		00,14
215		KNOB 4 ASSIGN	00~~7C : **1-3		00,15
PITCH EG					
216		START LEVEL	9D~~63 : -99~~99		01,00
217		ATTACK TIME	00~~63 : 00~~99		01,01
218		ATTACK LEVEL	9D~~63 : -99~~99		01,02
219		DECAY TIME	00~~63 : 00~~99		01,03
220		RELEASE TIME	00~~63 : 00~~99		01,04
221		RELEASE LEVEL	9D~~63 : -99~~99		01,05
222		A.M.SOURCE (LEVEL1)	00~~2A : **1-4	Alternate Modulation	01,08
223		INT BY A.M.(LEVEL1)	9D~~63 : -99~~99		01,09
224		A.M.SOURCE (LEVEL2)	00~~2A : **1-4	Alternate Modulation	01,0A
225		INT BY A.M.(LEVEL2)	9D~~63 : -99~~99		01,0B
226		A.M.SOURCE (TIME)	00~~2A : **1-4	Alternate Modulation	01,06
227		INT BY A.M.(TIME)	9D~~63 : -99~~99		01,07
228	b0~~1	START (A.M.LEVEL1)	FF:-, 0:OFF, 1:+		01,0E
	b2~~3	ATTACK (A.M.LEVEL1)	FF:-, 0:OFF, 1:+		01,0F
	b4~~5	START (A.M.LEVEL2)	FF:-, 0:OFF, 1:+		01,10
	b6~~7	ATTACK (A.M.LEVEL2)	FF:-, 0:OFF, 1:+		01,11
229	b0~~1	ATTACK (A.M.TIME)	FF:-, 0:OFF, 1:+		01,0C
	b2~~3	DECAY (A.M.TIME)	FF:-, 0:OFF, 1:+		01,0D
OSCILLATOR 1					
230	bit7	HI START OFFSET	0:OFF, 1:ON		02,02
	bit6	HI REVERSE	0:OFF, 1:ON		02,03
	b0~~6	HI SAMPLE NO.(MSB)	00~~03E7 : 00~~999		02,01
231		HI SAMPLE NO.(LSB)	**1-9		
232		HI BANK	0:ROM, 1:RAM, ~~???	??? is depend on PCM option.	02,00
233		HI LEVEL	00~~7F : 00~~127		02,04
234	bit7	LOW START OFFSET	0:OFF, 1:ON		02,07
	bit6	LOW REVERSE	0:OFF, 1:ON		02,08
	b0~~6	LOW SAMPLE NO.(MSB)	00~~03E7 : 00~~999		02,06
235		LOW SAMPLE NO.(LSB)			
236		LOW BANK	0:ROM, 1:RAM, ~~???	??? is depend on PCM option.	02,05



## TRITON STUDIO V2 MIDI IMPLEMENTATION

237		LOW LEVEL	00~~7F : 00~~127		02,09
238		DELAY START	00~~60,61 : **1-5		02,0A
239		VEL M.SAMPLE SW	01~~7F : 01~~127	( For Vel Split)	02,0B
240		VEL ZONE BOTTOM	01~~7F : 01~~127		02,0C
241		VEL ZONE TOP	01~~7F : 01~~127		02,0D
OSCILLATOR 1 LFO 1					
242	b0~~4	WAVEFORM	0~~14 : **1-6		03,00
	bit7	KEY SYNC.	0:OFF, 1:ON		03,01
243		FREQUENCY	00~~63 : 00~~99		03,02
244		OFFSET	9D~~63 : -99~~99		03,03
245		DELAY	00~~63 : 00~~99		03,04
246		FADE	00~~63 : 00~~99		03,05
247	bit7	MIDI/TEMPO SYNC.	0:OFF, 1:ON		03,0A
	b6~~4	SYNC BASE NOTE	0:16,1:8T,2:8,3:4T,4:4,5:2T,6:2,7:1		03,0B
	bit7	TIMES	00~~0F : 00~~16		03,0C
248		A.M.SOURCE (TIME1)	00~~2A : **1-4	Alternate Modulation	03,06
249		INT BY A.M.(TIME1)	9D~~63 : -99~~99		03,07
250		A.M.SOURCE (TIME2)	00~~2A : **1-4	Alternate Modulation	03,08
251		INT BY A.M.(TIME2)	9D~~63 : -99~~99		03,09
OSCILLATOR 1 LFO 2					
252 : 261		Same as OSCILLATOR 1 LFO 1 (242~~251) (10 Bytes)			04,00 : 04,0C
OSCILLATOR 1 PITCH					
262		OCTAVE	FE~~01 : 32~~4 ['']		05,00
263		TRANPOSE	F4~~0C : -12~~12		05,01
264		TUNE (MSB)	FB50~~04B0 : -1200~~1200		05,02
265		TUNE (LSB)	[Cent]		
266		A.M.SOURCE (PITCH)	00~~2A : **1-4	Alternate Modulation	05,03
267		INT BY A.M.(PITCH)	8D~~73 : **1-7		05,04
268		PITCH SLOPE	F6~~14 : -1.0~~2.0		05,05
269		INT BY PITCH EG	8D~~73 : **1-7		05,06
270		A.M.SOURCE (P. EG)	00~~2A : **1-4	Alternate Modulation	05,07
271		INT BY A.M.(P. EG)	8D~~73 : **1-7		05,08
272		INT BY OSC-1 LFO 1	8D~~73 : **1-7		05,09
273		INT BY OSC-1 LFO 2	8D~~73 : **1-7		05,0A
274	bit0	PORTAMENTO	0:DIS, 1:ENA		05,0B
	bit1	PORTAMENTO FINGERED	0:OFF, 1:ON		05,0C
275		PORTAMENTO TIME	00~~7F : 00~~127		05,0D
276		PITCH BY JS(+X)	C4~~0C : -60~~12		05,0E
277		PITCH BY JS(-X)	C4~~0C : -60~~12		05,0F
278		PITCH BY RIBBON(X)	F4~~0C : -12~~12		05,10

## TRITON STUDIO V2 MIDI IMPLEMENTATION

279	( RESERVED )				----
280	LFO1 INT BY JS(+Y)	8D~~73 :	**1-7		05,11
281	LFO2 INT BY JS(+Y)	8D~~73 :	**1-7		05,12
282	A.M.SOURCE(LFO1INT)	00~~2A :	**1-4	Alternate Modulation	05,13
283	INT BY A.M.(LFO1INT)	8D~~73 :	**1-7		05,14
284	A.M.SOURCE(LFO2INT)	00~~2A :	**1-4	Alternate Modulation	05,15
285	INT BY A.M.(LFO2INT)	8D~~73 :	**1-7		05,16
OSCILLATOR 1 FILTER					
286	TYPE	0:LPF+RESO, 1:LPF+HPF			06,00
287	TRIM	00~~63 : 00~~99			06,01
288	RESONANCE	00~~63 : 00~~99			06,02
289	A.M.SOURCE(RESO.)	00~~2A :	**1-4	Alternate Modulation	06,03
290	INT BY A.M.(RESO.)	9D~~63 : -99~~99			06,04
291	A.M.SOURCE(EG)	00~~2A :	**1-4	Alternate Modulation	06,05
292	A.M.SOURCE(LFO1)	00~~2A :	**1-4	Alternate Modulation	06,06
293	A.M.SOURCE(LFO2)	00~~2A :	**1-4	Alternate Modulation	06,07
OSCILLATOR 1 FILTER A					
294	FREQUENCY	00~~63 : 00~~99			07,00
295	KBD TRACK INTENSITY	9D~~63 : -99~~99			07,01
296	A.M.SOURCE(MOD1)	00~~2A :	**1-4	Alternate Modulation	07,02
297	INT BY A.M.(MOD1)	9D~~63 : -99~~99			07,03
298	A.M.SOURCE(MOD2)	00~~2A :	**1-4	Alternate Modulation	07,04
299	INT BY A.M.(MOD2)	9D~~63 : -99~~99			07,05
300	EG INTENSITY	9D~~63 : -99~~99			07,06
301	EG VELOCITY	9D~~63 : -99~~99			07,07
302	INT BY LFO 1	9D~~63 : -99~~99			07,08
303	INT BY LFO 2	9D~~63 : -99~~99			07,09
304	LFO 1 BY JS(-Y)	9D~~63 : -99~~99			07,0A
305	LFO 2 BY JS(-Y)	9D~~63 : -99~~99			07,0B
306	INT BY A.M.(EG)	9D~~63 : -99~~99		Alternate Modulation	07,0C
307	INT BY A.M.(LFO1)	9D~~63 : -99~~99		Alternate Modulation	07,0D
308	INT BY A.M.(LFO2)	9D~~63 : -99~~99		Alternate Modulation	07,0E
OSCILLATOR 1 FILTER B					
309	Same as OSCILLATOR 1 FILTER B (294~~308)				08,00
:	(15 Bytes)				:
323					08,0E
OSCILLATOR 1 FILTER EG					
324	START LEVEL	9D~~63 : -99~~99			09,00
325	ATTACK TIME	00~~63 : 00~~99			09,01
326	ATTACK LEVEL	9D~~63 : -99~~99			09,02
327	DECAY TIME	00~~63 : 00~~99			09,03
328	BREAK POINT LEVEL	9D~~63 : -99~~99			09,04

## TRITON STUDIO V2 MIDI IMPLEMENTATION

329	SLOPE TIME	00~~63 : 00~~99		09,05
330	SUSTAIN LEVEL	9D~~63 : -99~~99		09,06
331	RELEASE TIME	00~~63 : 00~~99		09,07
332	RELEASE LEVEL	9D~~63 : -99~~99		09,08
333	b7~~b6 RELEASE (A.M.TIME1)	FF:-, 0:OFF, 1:+		09,12
	b5~~b4 SLOPE (A.M.TIME1)	FF:-, 0:OFF, 1:+		09,11
	b3~~b2 DECAY (A.M.TIME1)	FF:-, 0:OFF, 1:+		09,10
	b1~~b0 ATTACK (A.M.TIME1)	FF:-, 0:OFF, 1:+		09,0F
334	b7~~b6 RELEASE (A.M.TIME2)	FF:-, 0:OFF, 1:+		09,16
	b5~~b4 SLOPE (A.M.TIME2)	FF:-, 0:OFF, 1:+		09,15
	b3~~b2 DECAY (A.M.TIME2)	FF:-, 0:OFF, 1:+		09,14
	b1~~b0 ATTACK (A.M.TIME2)	FF:-, 0:OFF, 1:+		09,13
335	b5~~b4 BREAK (A.M.LEVEL)	FF:-, 0:OFF, 1:+		09,19
	b3~~b2 ATTACK (A.M.LEVEL)	FF:-, 0:OFF, 1:+		09,18
	b1~~b0 START (A.M.LEVEL)	FF:-, 0:OFF, 1:+		09,17
336	A.M.SOURCE(TIME1)	00~~2A : **1-4	Alternate Modulation	09,09
337	INT BY A.M.(TIME1)	9D~~63 : -99~~99		09,0A
338	A.M.SOURCE(TIME2)	00~~2A : **1-4	Alternate Modulation	09,0B
339	INT BY A.M.(TIME2)	9D~~63 : -99~~99		09,0C
340	A.M.SOURCE(LEVEL)	00~~2A : **1-4	Alternate Modulation	09,0D
241	INT BY A.M.(LEVEL)	9D~~63 : -99~~99		09,0E
OSCILLATOR 1 FILTER KEYBOARD TRACK				
342	KEY LOW	00~~7F : C-1~~G9		0A,00
343	RAMP LOW	9D~~63 : -99~~99		0A,01
344	KEY HIGH	00~~7F : C-1~~G9		0A,02
345	RAMP HIGH	9D~~63 : -99~~99		0A,03
OSCILLATOR 1 AMPLIFIER				
346	LEVEL	00~~7F : 00~~127		0B,00
347	INT BY VELOCITY	9D~~63 : -99~~99		0B,01
348	A.M.SOURCE	00~~2A : **1-4	Alternate Modulation	0B,02
349	INT BY A.M.	9D~~63 : -99~~99		0B,03
350	INT BY LFO 1	9D~~63 : -99~~99		0B,04
351	INT BY LFO 2	9D~~63 : -99~~99		0B,05
352	A.M.SOURCE(LFO1)	00~~2A : **1-4	Alternate Modulation	0B,06
353	INT BY A.M.(LFO1)	9D~~63 : -99~~99		0B,07
354	A.M.SOURCE(LFO2)	00~~2A : **1-4	Alternate Modulation	0B,08
355	INT BY A.M.(LFO2)	9D~~63 : -99~~99		0B,09
OSCILLATOR 1 AMPLIFIER EG				
356	START LEVEL	00~~63 : 00~~99		0C,00
357	ATTACK TIME	00~~63 : 00~~99		0C,01
358	ATTACK LEVEL	00~~63 : 00~~99		0C,02

## TRITON STUDIO V2 MIDI IMPLEMENTATION

359	DECAY TIME	00~~63 : 00~~99		0C,03
360	BREAK POINT LEVEL	00~~63 : 00~~99		0C,04
361	SLOPE TIME	00~~63 : 00~~99		0C,05
362	SUSTAIN LEVEL	00~~63 : 00~~99		0C,06
363	RELEASE TIME	00~~63 : 00~~99		0C,07
364	A.M.SOURCE(TIME1)	00~~2A : **1-4	Alternate Modulation	0C,08
365	INT BY A.M.(TIME1)	9D~~63 : -99~~99		0C,09
366	A.M.SOURCE(TIME2)	00~~2A : **1-4	Alternate Modulation	0C,0A
367	INT BY A.M.(TIME2)	9D~~63 : -99~~99		0C,0B
368	A.M.SOURCE(LEVEL)	00~~2A : **1-4	Alternate Modulation	0C,0C
369	INT BY A.M.(LEVEL)	9D~~63 : -99~~99		0C,0D
370	b0~~1	ATTACK (A.M.TIME1)	FF:-, 0:OFF, 1:+	0C,0E
	b2~~3	DECAY (A.M.TIME1)	FF:-, 0:OFF, 1:+	0C,0F
	b4~~5	SLOPE (A.M.TIME1)	FF:-, 0:OFF, 1:+	0C,10
	b6~~7	RELEASE (A.M.TIME1)	FF:-, 0:OFF, 1:+	0C,11
371	b0~~1	ATTACK (A.M.TIME2)	FF:-, 0:OFF, 1:+	0C,12
	b2~~3	DECAY (A.M.TIME2)	FF:-, 0:OFF, 1:+	0C,13
	b4~~5	SLOPE (A.M.TIME2)	FF:-, 0:OFF, 1:+	0C,14
	b6~~7	RELEASE (A.M.TIME2)	FF:-, 0:OFF, 1:+	0C,15
372	b0~~1	START (A.M.LEVEL)	FF:-, 0:OFF, 1:+	0C,16
	b2~~3	ATTACK (A.M.LEVEL)	FF:-, 0:OFF, 1:+	0C,17
	b4~~5	BREAK (A.M.LEVEL)	FF:-, 0:OFF, 1:+	0C,18
273	( RESERVED )			----
OSCILLATOR 1 AMPLIFIER KEYBOARD TRACK				
374	KEY LOW	00~~7F : C-1~~G9		0D,00
375	RAMP LOW	9D~~63 : -99~~99		0D,01
376	KEY HIGH	00~~7F : C-1~~G9		0D,02
377	RAMP HIGH	9D~~63 : -99~~99		0D,03
OSCILLATOR 1 OUTPUT				
378	( RESERVED )			----
379	b0~~6	PAN	00:RND, 01~~7F : L001~~R127	0E,00
	bit7	USE DKIT SETTING	0:OFF, 1:ON (Available for OSC1 only)	0E,05
380	A.M.SOURCE(PAN)	00~~2A : **1-4	Alternate Modulation	0E,01
381	INT BY A.M.(PAN)	9D~~63 : -99~~99		0E,02
382	SEND1 (TO MFX1)	00~~7F: 00~~127		0E,03
383	SEND2 (TO MFX2)	00~~7F: 00~~127		0E,04
OSCILLATOR 2				
384	Same as OSCILLATOR 1 (230~~383) (154 Bytes)			0F,00
537				1B,0E
538	( RESERVED )			----
539				----

# TRITON STUDIO V2 MIDI IMPLEMENTATION

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**1-1 :      0 : Equal Temperament      1 : Pure Major      2 : Pure Minor      3 : Octave Down
           3 : Arabic                  4 : Pythagoras      5 : Werkmeister
           6 : Kirnberger              7 : Slendro        8 : Pelog
           9 : Stretch                A : User All Notes Scale
      B~~1A : User Octave Scale 00 ~~15

**1-2 : 0 : OFF                      1 : SW 1/2 Mod:CC#80/CC#81      2 : Porta SW      3 : Octave Down
         4 : Octave Up                5 : JS X Lock                6 : JS+Y Lock      7 : JS-Y Lock
         8 : Ribbon Lock              9 : JS X & Ribbon Lock        A : JS+Y & Ribbon Lock  B : JS-Y & Ribbon Lock
Lock
      C : After Touch Lock

**1-3 : 0 : Off                      1 : Knob Mod.1:CC#17      2 : Knob Mod.2:CC#19      3 : Knob Mod.3:CC#20
         4 : Knob Mod.4:CC#21          5 : Master Volume          6 : Portamento Time:CC#05  7 : Volume:CC#07
         8 : Post IFX Pan:CC#08        9 : Pan:CC#10              A : Expression:CC#11      B : FX Control
1:CC#12
      C : FX Control 2:CC#13          D : LPF Cutoff:CC#74      E : Resonance/HPF:CC#71  F : Filter EG
Int.:CC#79
         10 : F/A Attack:CC#73         11 : F/A Decay:CC#75      12 : F/A Sustain:CC#70    13 : F/A
Release:CC#72
         14 : Pitch LFO1 Spd:CC#76     15 : Pitch LFO1 Dep:CC#77  16 : Pitch LFO1 Dly:CC#78  17 : SW 1
Mod.:CC#80
         18 : SW 2 Mod.:CC#81          19 : Foot Switch:CC#82    1A : MIDI CC#83          1B : MFX Send
1:CC#93
         1C : MFX Send 2:CC#91         1D~~~7C : MIDI CC#00~~MIDI CC#95

**1-4 : 0 : Off                      1 : Pitch EG              2 : Filter EG              3 : Amp EG
         4 : LFO 1                      5 : LFO 2                  6 : Flt KTrk +/-          7 : Flt KTrk +/-
         8 : Flt KTrk 0/+                9 : Flt KTrk +/-0          A : Amp KTrk +/-          B : Amp KTrk +/-
         C : Amp KTrk 0/+                D : Amp KTrk +/-0          E : Note Number           F : Velocity
         10 : Poly After                 11 : After Touch          12 : JS X                  13 : JS+Y:CC#01
         14 : JS-Y:CC#02                 15 : JS+Y & AT/2          16 : JS-Y & AT/2          17 : Pedal:CC#04
         18 : Ribbon:CC#16               19 : Slider:CC#18         1A : KnobMod1:#17         1B : KnobMod2:#19
         1C : KnobMod3:#20               1D : KnobMod4:#21         1E : KnobMod1 [+]         1F : KnobMod2 [+]
         20 : KnobMod3 [+]               21 : KnobMod4 [+]         22 : Damper:#64           23 : Porta.SW:#65
         24 : Sostenuto:#66              25 : Soft:CC#67           26 : SW 1:CC#80           27 : SW 2:CC#81
         28 : Foot SW:#82                29 : MIDI:CC#83          2A : Tempo

**1-5 : Data      Time[mSec]      Step
      00~~19 :      00~~ 50      (2mSec)
      1A~~28 :      60~~ 200      (10mSec)
      29~~38 :     250~~1000      (50mSec)
      39~~60 :    1100~~5000      (100mSec)
      61 :      KeyOff

**1-6 : 0 : Triangle 0                1 : Triangle 90            2 : Triangle Random        3 : Saw 0
         4 : Saw 180                    5 : Square                 6 : Sine                   7 : Guitar
         8 : Exponential Triangle        9 : Exponential Saw Down    A : Exponential Saw Up      B : Step Triangle-
4
         C : Step Triangle-6              D : Step Saw-4              E : Step Saw-6              F : Random1 (S/H)
      10 : Random2 (S/H)                  11 : Random3 (S/H)          12 : Random4 (Vector)       13 : Random5 (Vector)
      14 : Random6 (Vector)

**1-7 : 8D~~C3 :    -12.00~~ -1.20      (0.20 Step)
         C4~~CD :    -1.00~~ -0.55      (0.05 Step)
         CE~~32 :    -0.50~~ +0.50      (0.01 Step)
         33~~3C :    +0.55~~ +1.00      (0.05 Step)
         3D~~73 :    +1.20~~+12.00      (0.20 Step)

**1-8 : Arpeggio Pattern No. Format
      PATTERN NO.MSB(No.195 bit5) : N
      PATTERN NO.(No.194) : nnnnnnnnn
      Nnnnnnnnn = 0~~1FF : 0~~511

**1-9 : When OSCILLATOR MODE is Drums,
      00~~3F : Drum Kit 00 ~~ 63
      40~~48 : Drum Kit 144 ~~ 152 (GM)
      49~~98 : Drum Kit 64 ~~ 143

```

[ TABLE 2-1 ]                      MOSS PROGRAM PARAMETERS ( for Optional EXB-MOSS )

No. : No. in the PROGRAM DUMP DATA.

PARA No. : Parameter ID & SUB ID [Hex] for PARAMETER CHANGE.

Left side of ',' is Parameter ID, and right side is SUB ID.

No. (bit)	PARAMETER	DATA(Hex) : VALUE	DESCRIPTION	PARA No.
00	PROGRAM NAME (Head)	20~~7F		----
15	PROGRAM NAME (Tail)			

## TRITON STUDIO V2 MIDI IMPLEMENTATION

INSERT EFFECT PARAMETERS					
16 : 135	Same as PROGRAM [TABLE 1] INSERT EFFECT (16~~135) (120 Bytes)			1E,00 : 4D,??	
MASTER EFFECT PARAMETERS					
136 : 191	Same as PROGRAM [TABLE 1] MASTER EFFECT (136~~191) (56 Bytes)			24,00 : 4E,??	
ARPEGGIATOR PARAMETERS					
192  203	Same as PROGRAM [TABLE 1] ARPEGGIATOR (192~~213) (12 Bytes)			4B,00 : 4C,0D	
COMMON PARAMETERS					
204	b0~~1	(OSCILLATOR MODE)	3	3 Fixed ( Means MOSS )	----
	b2~~3	VOICE ASSIGN	0:Mono Multi, 1:Mono Single, 2:Poly		28,03
	b4~~5	KEY PRIORITY	0:Low, 1:High, 2:Last	Available when MONO	28,02
	bit6	(Ignore)			
	bit7	HOLD	0:OFF, 1:ON		28,01
205	BUS SELECT		00:L/R,01~~05:IFX1~~5,06~~09:1~~4,0A:1/2,0B:3/4,0C:Off	28,09	
206	CATEGORY		00~~0F : 01~~16	28,00	
207	SCALE TYPE		00~~1A : **1-1	28,0A	
208	SCALE KEY		00~~0B : C ~~ B	28,0B	
209	RANDOM INTENSITY		00~~63 : 0~~99	28,0C	
210	SW 1				
	b0~~5	ASSIGN	00~~0C : **1-2		28,0D
	bit6	MODE	0:Toggle, 1:Momentary		28,11
	bit7	SW	0:OFF, 1:ON		28,0E
211	SW 2 ( Same as SW 1 (210) )			28,10~~12	
212	b0~~6	KNOB 1 ASSIGN TYPE	00~~7C : **1-3	28,13	
	bit7	REALTIME CONTROLS	0:A, 1:B	28,17	
213	KNOB 2 ASSIGN		00~~7C : **1-3	28,14	
214	KNOB 3 ASSIGN		00~~7C : **1-3	28,15	
215	KNOB 4 ASSIGN		00~~7C : **1-3	28,16	
RETRIGGER CONTROL					
216	RETRIGGER CONTROLLER		00,0B~~29 : *2-1	28,04	
217	THRESHOLD VELOCITY		01~~7F : 1~~127	28,05	
UNISON					
218	b0~~1	UNISON TYPE	0:OFF, 1:2voices, 2:3voices, 3:6voices	28,06	
	bit2	(UNISON SW)	1	1 Fixed ( Means Enable )	----
	bit3	UNISON MODE	0:Fixed, 1:Dynamic		28,07
219	UNISON DETUNE		00~~63 : 0~~99	28,08	
EG1					
220	START LEVEL		9D~~63 : -99~~99	36,00	
221	ATTACK TIME		00~~63 : 0~~99	36,01	
222	ATTACK LEVEL		9D~~63 : -99~~99	36,02	

## TRITON STUDIO V2 MIDI IMPLEMENTATION

223	DECAY TIME	00~~63 : 0~~99		36,03
224	BREAK LEVEL	9D~~63 : -99~~99		36,04
225	SLOPE TIME	00~~63 : 0~~99		36,05
226	SUSTAIN LEVEL	9D~~63 : -99~~99		36,06
227	RELEASE TIME	00~~63 : 0~~99		36,07
228	RELEASE LEVEL	9D~~63 : -99~~99		36,08
229	LEVEL AMS	00~~29 : *2-1	Alternate Modulation	36,09
230	INTENSITY	9D~~63 : -99~~99		36,0A
231	VELOCITY CONTROL	9D~~63 : -99~~99		36,0B
232	TIME AMS 1	00~~29 : *2-1	Alternate Modulation	36,0C
233	INTENSITY	9D~~63 : -99~~99		36,0D
234	TIME AMS 2	00~~29 : *2-1	Alternate Modulation	36,0E
235	ATTACK INTENSITY	9D~~63 : -99~~99		36,0F
236	DECAY INTENSITY	9D~~63 : -99~~99		36,10
237	SLOPE INTENSITY	9D~~63 : -99~~99		36,11
238	RELEASE INTENSITY	9D~~63 : -99~~99		36,12
EG 2 ~~ 4				
239 : 257	EG 2 ( Same as EG 1 (220 ~~ 238) ) (19 Bytes)			See above 18 parameters. ParamID = 37
258 : 276	EG 3 ( Same as EG 1 (220 ~~ 238) ) (19 Bytes)			See above 18 parameters. ParamID = 38
277 : 295	EG 4 ( Same as EG 1 (220 ~~ 238) ) (19 Bytes)			See above 18 parameters. ParamID = 39
LFO 1				
b0~~5	WAVEFORM	00:Triangle 0, 01:Triangle 90, 02:Triangle Random, 03:Sine, 04:Saw Up 0, 05:Saw Up 180, 06:Saw Down 0, 07:Saw Down 180, 08:Square, 09:Random-S/H, 0A:Random-Vector, 0B:Step Triangle-4, 0C:Step Triangle-6, 0D:Step Saw-4, 0E:Step Saw-6, 0F:Exponential Triangle, 10:Exponential Saw Up, 11:Exponential Saw Down		3A,00
296 b6~~7	KEY SYNC.	0:Off, 1:byTimbre, 2:byVoice		3A,01
297	FREQUENCY	00~~C7 : 0~~199		3A,02
298	FREQUENCY AMS 1	00~~29 : *2-1	Alternate Modulation	3A,03
299	INTENSITY	9D~~63 : -99~~99		3A,04
300	FREQUENCY AMS 2	00~~29 : *2-1	Alternate Modulation	3A,05
301	INTENSITY	9D~~63 : -99~~99		3A,06
302	FADE IN	00~~63 : 0~~99		3A,07
303	AMPLITUDE AMS	00~~29 : *2-1	Alternate Modulation	3A,08
304	INTENSITY	9D~~63 : -99~~99		3A,09
305	OFFSET	CE~~32 : -50~~50		3A,0A
b0~~3	MIDI/TEMPO SYNC. TIMES	00~~0F : 1~~16		3A,0D
306 b4~~6	BASE NOTE	0:16,1:8T,2:8,3:4T,4:4,5:2T,6:2,7:1		3A,0C
bit7	SYNC. SW	0:OFF, 1:ON		3A,0B

## TRITON STUDIO V2 MIDI IMPLEMENTATION

LFO 2 ~ 4				
307 : 317	LFO 2 ( Same as LFO 1 (296 ~ 306) ) (11 Bytes)			See above 14 parameters. ParamID = 3B
318 : 328	LFO 3 ( Same as LFO 1 (296 ~ 306) ) (11 Bytes)			See above 14 parameters. ParamID = 3C
329 : 339	LFO 4 ( Same as LFO 1 (296 ~ 306) ) (11 Bytes)			See above 14 parameters. ParamID = 3D
OSC COMMON PITCH MODULATION				
340	JS(+X) INTENSITY	C4~~18 : -60~~24		29,04
341	JS(-X) INTENSITY	C4~~18 : -60~~24		29,05
342	b0~~3	PITCH BEND STEP JS(+X)	00:Continuous, 01:1/8, 02:1/4, 03:1/2, 05~~0F:01~~12	29,06
	b4~~7	JS(-X)		29,07
343	COMMON PITCH AMS	00~~29 : *2-1	Alternate Modulation	29,02
344	INTENSITY	9D~~63 : -99~~99		29,03
PORTAMENTO				
345	bit0	ENABLE SW	0:OFF, 1:ON	29,08
	bit1	FINGERED MODE SW	0:OFF, 1:ON	29,09
346	PORTAMENTO TIME	00~~63 : 0~~99		29,0A
347	TIME AMS	00~~29 : *2-1	Alternate Modulation	29,0B
348	INTENSITY	9D~~63 : -99~~99		29,0C
OSC 1				
349	OSC TYPE	(Single Size) 00:Standard, 01:Comb Filter, 02:VPM, 03:Resonance, 04:Ring Mod, 05:Cross Mod, 06:Sync Mod, 07:Organ Model, 08:E.Piano Model, (Double Size) 09:Brass Model, 0A:Reed Model, 0B:Plucked String Model, 0C:Bowed String Model		29,00
350	OCTAVE	00:-2[32'], 01:-1[16'], 02:0[8'], 03:1[4']		2A,00
351	TRANPOSE	F4~~0C : -12~~12		2A,01
352	TUNE	CE~~32 : -50~~50 [cent]		2A,02
353	FREQUENCY OFFSET	9C~~64 : -10.0~~10.0 [Hz]		2A,03
354	PITCH SLOPE CENTER KEY	00~~7F : C-1~~G9		2A,04
355	RAMP LOW	CE~~64 : -1.00~~2.00	0.01 by step.	2A,05
356	RAMP HIGH	CE~~64 : -1.00~~2.00		2A,06
357	PITCH AMS 1	00~~29 : *2-1	Alternate Modulation	2A,07
358	INTENSITY	9D~~63 : -99~~99		2A,08
359	AMS 1 INTENSITY AMS	00~~29 : *2-1	Alternate Modulation	2A,09
360	INTENSITY	9D~~63 : -99~~99		2A,0A
361	PITCH AMS 2	00~~29 : *2-1	Alternate Modulation	2A,0B
362	INTENSITY	9D~~63 : -99~~99		2A,0C
363 : 400	OSC SET 38 bytes (Parameters are determined by OSC TYPE. See [Table 2-2].)			
OSC 2				



## TRITON STUDIO V2 MIDI IMPLEMENTATION

401	OSC TYPE	(SingleSize Only) 00:Standard, 01:Comb Filter, 02:VPM, 03:Resonance, 04:Ring Mod, 05:Cross Mod, 06:Sync Mod, 07:Organ Model, 08:E.Piano Model	29,01
402 : 452	OSC 2 ( Much the same as OSC 1 (350 ~ 400), except OSC TYPE. ) (51 Bytes)		See above 51 parameters. ParamID = 2B
SUB OSC			
453	OCTAVE	00:-2[32'], 01:-1[16'], 02:0[8'], 03:1[4']	2C,00
454	TRANPOSE	F4~~0C : -12~~12	2C,01
455	TUNE	CE~~32 : -50~~50 [cent]	2C,02
456	FREQUENCY OFFSET	9C~~64 : -10.0~~10.0 [Hz]	2C,03
457	PITCH SLOPE CENTER KEY	00~~7F : C-1~~G9	2C,04
458	RAMP LOW	CE~~64 : -1.00~~2.00	2C,05
459	RAMP HIGH	CE~~64 : -1.00~~2.00	2C,06
460	PITCH AMS 1	00~~29 : *2-1	Alternate Modulation 2C,07
461	INTENSITY	9D~~63 : -99~~99	2C,08
462	AMS 1 INTENSITY AMS	00~~29 : *2-1	Alternate Modulation 2C,09
463	INTENSITY	9D~~63 : -99~~99	2C,0A
464	PITCH AMS 2	00~~29 : *2-1	Alternate Modulation 2C,0B
465	INTENSITY	9D~~63 : -99~~99	2C,0C
466	WAVEFORM	0:Saw, 1:Square, 2:Triangle, 3:Sine	2D,00
NOISE GENERATOR			
467	NOISE FILTER TYPE	0:THRU, 1:LPF, 2:HPF, 3:BPF	2D,01
468	FILTER INPUT TRIM	00~~63 : 00~~99	2D,02
469	FILTER FREQUENCY	00~~63 : 00~~99	2D,03
470	FREQUENCY AMS 1	00~~29 : *2-1	Alternate Modulation 2D,04
471	INTENSITY	9D~~63 : -99~~99	2D,05
472	FREQUENCY AMS 2	00~~29 : *2-1	Alternate Modulation 2D,06
473	INTENSITY	9D~~63 : -99~~99	2D,07
474	FILTER RESONANCE	00~~63 : 00~~99	2D,08
OSC MIXER			
475	OSC 1 -> Mixer1 LEVEL	00~~63 : 00~~99	2E,00
476	LEVEL AMS	00~~29 : *2-1	Alternate Modulation 2E,01
477	INTENSITY	9D~~63 : -99~~99	2E,02
478 : 480	OSC 1 -> Mixer2 ( Same as OSC 1 -> Mixer1 (475 ~ 477) )		See above 3 parameters. SUB ID = 03~~05
481 : 483	OSC 2 -> Mixer1 ( Same as OSC 1 -> Mixer1 (475 ~ 477) )		See above 3 parameters. SUB ID = 06~~08
484 : 486	OSC 2 -> Mixer2 ( Same as OSC 1 -> Mixer1 (475 ~ 477) )		See above 3 parameters. SUB ID = 09~~0B
487 : 489	SUB OSC -> Mixer1 ( Same as OSC 1 -> Mixer1 (475 ~ 477) )		See above 3 parameters. SUB ID = 0C~~0E

## TRITON STUDIO V2 MIDI IMPLEMENTATION

490 : 492	SUB OSC -> Mixer2 ( Same as OSC 1 -> Mixer1 (475 ~~ 477) )				See above 3 parameters. SUB ID = 0F~~11
493 : 495	Noise -> Mixer1 ( Same as OSC 1 -> Mixer1 (475 ~~ 477) )				See above 3 parameters. SUB ID = 12~~14
496 : 498	Noise -> Mixer2 ( Same as OSC 1 -> Mixer1 (475 ~~ 477) )				See above 3 parameters. SUB ID = 15~~17
499 : 501	Feedback -> Mixer1 ( Same as OSC 1 -> Mixer1 (475 ~~ 477) )				See above 3 parameters. SUB ID = 18~~1A
502 : 504	Feedback -> Mixer2 ( Same as OSC 1 -> Mixer1 (475 ~~ 477) )				See above 3 parameters. SUB ID = 1B~~1D
505	bit0	(INPUT SW) OSC 1	1	1 Fixed ( Means Enable )	----
	bit1	OSC 2	1	1 Fixed ( Means Enable )	----
	bit2	SUB OSC	1	1 Fixed ( Means Enable )	----
	bit3	Noise	1	1 Fixed ( Means Enable )	----
FILTER ROUTING					
506	b0~~1	ROUTING	0:Serial 1, 1:Serial 2, 2:Parallel		2F,00
	bit2	LINK SW	0:OFF, 1:ON		2F,01
FILTER 1					
507	FILTER TYPE		0:LPF(A), 1:HPF(A), 2:BPF(A), 3:BRF(A), 4:DualBP(A/B)		30,00
508	INPUT TRIM		00~~63 : 00~~99		30,01
509	FILTER FREQUENCY		00~~63 : 00~~99		30,02
510	FREQUENCY KBD TRACK KEY LOW		00~~7F : C-1~~G9		30,03
511	KEY HIGH		00~~7F : C-1~~G9		30,04
512	RAMP LOW		9D~~63 : -99~~99		30,05
513	RAMP HIGH		9D~~63 : -99~~99		30,06
514	FREQUENCY MOD.EG		00~~04 : EG1~~4, AmpEG	Alternate Modulation	30,07
515	INTENSITY		9D~~63 : -99~~99		30,08
516	FILTER AMS 1		00~~29 : *2-1	Alternate Modulation	30,09
517	INTENSITY		9D~~63 : -99~~99		30,0A
518	FILTER AMS 2		00~~29 : *2-1	Alternate Modulation	30,0B
519	INTENSITY		9D~~63 : -99~~99		30,0C
520	FILTER RESONANCE		00~~63 : 00~~99		30,0D
521	RESONANCE AMS		00~~29 : *2-1	Alternate Modulation	30,0E
522	INTENSITY		9D~~63 : -99~~99		30,0F
523	B:INPUT TRIM		00~~63 : 00~~99		32,00
524	B:FILTER FREQUENCY		00~~63 : 00~~99		32,01
525	B:FREQ. KBD TRACK KEY LOW		00~~7F : C-1~~G9		32,02
526	KEY HIGH		00~~7F : C-1~~G9		32,03
527	RAMP LOW		9D~~63 : -99~~99		32,04
528	RAMP HIGH		9D~~63 : -99~~99		32,05

## TRITON STUDIO V2 MIDI IMPLEMENTATION

529	B:FREQ. EG INTENSITY	9D~~63 : -99~~99	Alternate Modulation	32,06
530	B:FREQ. AMS 1 INT.	9D~~63 : -99~~99	Alternate Modulation	32,07
531	B:FREQ. AMS 2 INT.	9D~~63 : -99~~99	Alternate Modulation	32,08
532	B:FILTER RESONANCE	00~~63 : 00~~99		32,09
533	B:RESONANCE INT.	9D~~63 : -99~~99	Alternate Modulation	32,0a
534 : 560	FILTER 2 ( Same as FILTER 1 (507 ~~ 533) ) (27 Bytes)		See above 27 parameters. ParamID = 31 or (B:) 33	
AMPLIFIER 1				
561	AMP LEVEL	00~~63 : 00~~99		34,00
562	KEYBOARD TRACK KEY LOW	00~~7F : C-1~~G9		34,01
563	KEY HIGH	00~~7F : C-1~~G9		34,02
564	RAMP LOW	9D~~63 : -99~~99		34,03
565	RAMP HIGH	9D~~63 : -99~~99		34,04
566	MOD.EG	00~~04 : EG1~~4, AmpEG		34,05
567	(Reserved)	99	99 Fixed	-----
568	AMS	00~~29 : *2-1	Alternate Modulation	34,06
569	INTENSITY	9D~~63 : -99~~99		34,07
570 : 578	AMPLIFIER 2 ( Same as AMPLIFIER 1 (561 ~~ 569) ) (9 Bytes)		See above 8 parameters. PARA No. :34,08~~34,0F	
AMP EG				
579	(Reserved)	0	0 Fixed	-----
580	ATTACK TIME	00~~63 : 0~~99		35,00
581	ATTACK LEVEL	00~~63 : 0~~99		35,01
582	DECAY TIME	00~~63 : 0~~99		35,02
583	BREAK LEVEL	00~~63 : 0~~99		35,03
584	SLOPE TIME	00~~63 : 0~~99		35,04
585	SUSTAIN LEVEL	00~~63 : 0~~99		35,05
586	RELEASE TIME	00~~63 : 0~~99		35,06
587	(Reserved)	0	0 Fixed	-----
588	LEVEL AMS	00~~29 : *2-1	Alternate Modulation	35,07
589	INTENSITY	9D~~63 : -99~~99		35,08
590	VELOCITY CONTROL	9D~~63 : -99~~99		35,09
591	TIME AMS 1	00~~29 : *2-1	Alternate Modulation	35,0A
592	INTENSITY	9D~~63 : -99~~99		35,0B
593	TIME AMS 2	00~~29 : *2-1	Alternate Modulation	35,0C
594	ATTACK INTENSITY	9D~~63 : -99~~99		35,0D
595	DECAY INTENSITY	9D~~63 : -99~~99		35,0E
596	SLOPE INTENSITY	9D~~63 : -99~~99		35,0F
597	RELEASE INTENSITY	9D~~63 : -99~~99		35,10
OUTPUT LEVEL/PAN				
598	PAN	00~~7F : L000~~R127		34,10

# TRITON STUDIO V2 MIDI IMPLEMENTATION

599	PAN AMS	00~~29 : *2-1	Alternate Modulation	34,11
600	INTENSITY	9D~~63 : -99~~99		34,12
601	OUTPUT LEVEL	00~~7F : 0~~127		34,13
602	SEND 1	00~~7F : 0~~127		34,14
603	SEND 2	00~~7F : 0~~127		34,15

[ TABLE 2-2 ] MULTI OSCILLATOR PARAMETERS ( for Optional EXB-MOSS )

1999.05.11

No. : No. in the OSC SET (38 bytes).

SUB ID : Right side of '/' is SUB ID for OSC 2.

No. (bit)	PARAMETER	DATA(Hex) : VALUE	DESCRIPTION	SUB ID
MULTI OSCILLATOR PARAMETERS 38 Bytes				
0:Standard			ParamID = 3E	
00	WAVE WAVE	0:Saw, 1:Pulse		00/16
01	WAVE EDGE	00~~63 : 0~~99		01/17
02	LEVEL	00~~63 : 0~~99		02/18
03	TRIANGLE LEVEL	00~~63 : 0~~99		03/19
04	SINE LEVEL	00~~63 : 0~~99		04/1A
05	PHASE SHIFT	9D~~63 : -99~~99		05/1B
06	WAVEFORM WAVEFORM	9D~~63 : -99~~99		06/1C
07	MOD. LFO	00~~03 : LFO 1 ~~ 4	Alternate Modulation	07/1D
08	INTENSITY	9D~~63 : -99~~99		08/1E
09	AMS	00~~29 : *2-1	Alternate Modulation	09/1F
10	INTENSITY	9D~~63 : -99~~99		0A/20
11	WAVE SHAPE INPUT LEVEL	00~~63 : 0~~99		0B/21
12	INPUT LEVEL AMS	00~~29 : *2-1	Alternate Modulation	0C/22
13	INTENSITY	9D~~63 : -99~~99		0D/23
14	OFFSET	9D~~63 : -99~~99		0E/24
15	TYPE	0:Clip, 1:Reso		0F/25
16	SHAPE	00~~63 : 0~~99		10/26
17	SHAPE AMS	00~~29 : *2-1	Alternate Modulation	11/27
18	INTENSITY	9D~~63 : -99~~99		12/28
19	BALANCE	00~~63 : 0~~99		13/29
20	BALANCE AMS	00~~29 : *2-1	Alternate Modulation	14/2A
21	INTENSITY	9D~~63 : -99~~99		15/2B
22~~37	(Reserved)	0	0 Fixed	----
1:Comb Filter			ParamID = 3F	
00	INPUT INPUT WAVE	0:OSC2(1)+Noise, 1:Sub OSC+Noise, 2:Filter1+Noise, 3:Filter2+Noise, 4:Pulse Noise, 5:Impulse		00/0E
01	INPUT WAVE LEVEL	00~~63 : 0~~99		01/0F
02	NOISE LEVEL	00~~63 : 0~~99		02/10

## TRITON STUDIO V2 MIDI IMPLEMENTATION

03	PULSE WIDTH	00~~63 : 0~~99		03/11
04	INPUT LEVEL AMS	00~~29 : *2-1	Alternate Modulation	04/12
05	INTENSITY	9D~~63 : -99~~99		05/13
06	FEEDBACK FEEDBACK	00~~63 : 0~~99		06/14
07	AMS 1	00~~29 : *2-1	Alternate Modulation	07/15
08	INTENSITY	9D~~63 : -99~~99		08/16
09	AMS 2	00~~29 : *2-1	Alternate Modulation	09/17
10	INTENSITY	9D~~63 : -99~~99		0A/18
11	HIGH DAMP HIGH DAMP	00~~63 : 0~~99		0B/19
12	AMS	00~~29 : *2-1	Alternate Modulation	0C/1A
13	INTENSITY	9D~~63 : -99~~99		0D/1B
14~~37	(Reserved)	0	0 Fixed	-----
2:VPM		ParamID = 40		
00	CARRIER WAVE	0:Saw, 1:Square, 2:Triangle, 3:Sine		00/19
01	WAVE LEVEL	00~~63 : 0~~99		01/1A
02	LEVEL AMS 1	00~~29 : *2-1	Alternate Modulation	02/1B
03	INTENSITY	9D~~63 : -99~~99		03/1C
04	LEVEL AMS 2	00~~29 : *2-1	Alternate Modulation	04/1D
05	INTENSITY	9D~~63 : -99~~99		05/1E
06	WAVE SHAPE	00~~63 : 0~~99		06/1F
07	SHAPE AMS 1	00~~29 : *2-1	Alternate Modulation	07/20
08	INTENSITY	9D~~63 : -99~~99		08/21
09	SHAPE AMS 2	00~~29 : *2-1	Alternate Modulation	09/22
10	INTENSITY	9D~~63 : -99~~99		0A/23
11	WAVE SHAPE TYPE	00~~01 : 1~~2		0B/24
12	FEEDBACK	00~~63 : 0~~99		0C/25
13	MODULATOR FREQUENCY COARSE	00~~10 : 0.5~~16		0D/26
14	FREQUENCY FINE	CE~~32 : -50~~50		0E/27
15	FREQUENCY AMS 1	00~~29 : *2-1	Alternate Modulation	0F/28
16	INTENSITY	9D~~63 : -99~~99		10/29
17	FREQUENCY AMS 2	00~~29 : *2-1	Alternate Modulation	11/2A
18	INTENSITY	9D~~63 : -99~~99		12/2B
19	WAVE	0:Saw, 1:Square, 2:Triangle, 3:Sine 4:OSC2(1), 5:Sub OSC, 6:Filter1, 7:Filter2		13/2C
20	WAVE LEVEL	00~~63 : 0~~99		14/2D
21	LEVEL AMS 1	00~~29 : *2-1	Alternate Modulation	15/2E
22	INTENSITY	9D~~63 : -99~~99		16/2F
23	LEVEL AMS 2	00~~29 : *2-1	Alternate Modulation	17/30
24	INTENSITY	9D~~63 : -99~~99		18/31
25~~37	(Reserved)	0	0 Fixed	-----

## TRITON STUDIO V2 MIDI IMPLEMENTATION

3:Resonance			ParamID = 41
00	INPUT INPUT WAVE	0:OSC2(1), 1:Sub OSC, 2:Noise, 3:Filter1, 4:Filter2	00/20
01	INPUT WAVE LEVEL	00~~63 : 0~~99	01/21
02	LEVEL AMS 1	00~~29 : *2-1	Alternate Modulation 02/22
03	INTENSITY	9D~~63 : -99~~99	03/23
04	LEVEL AMS 2	00~~29 : *2-1	Alternate Modulation 04/24
05	INTENSITY	9D~~63 : -99~~99	05/25
06	BPF 1 RESONANCE	00~~63 : 0~~99	06/26
07	FREQUENCY COARSE	00~~0F : 01~~16	07/27
08	FREQUENCY AMS	00~~29 : *2-1	Alternate Modulation 08/28
09	INTENSITY	F1~~0F : -15~~15	09/29
10	FREQUENCY FINE	9D~~63 : -99~~99	0A/2A
11	LEVEL	00~~63 : 0~~99	0B/2B
12	BPF 2 RESONANCE	00~~63 : 0~~99	0C/2C
13	FREQUENCY COARSE	00~~0F : 01~~16	0D/2D
14	FREQUENCY AMS	00~~29 : *2-1	Alternate Modulation 0E/2E
15	INTENSITY	F1~~0F : -15~~15	0F/2F
16	FREQUENCY FINE	9D~~63 : -99~~99	10/30
17	LEVEL	00~~63 : 0~~99	11/31
18	BPF 3 RESONANCE	00~~63 : 0~~99	12/32
19	FREQUENCY COARSE	00~~0F : 01~~16	13/33
20	FREQUENCY AMS	00~~29 : *2-1	Alternate Modulation 14/34
21	INTENSITY	F1~~0F : -15~~15	15/35
22	FREQUENCY FINE	9D~~63 : -99~~99	16/36
23	LEVEL	00~~63 : 0~~99	17/37
24	BPF 4 RESONANCE	00~~63 : 0~~99	18/38
25	FREQUENCY COARSE	00~~0F : 01~~16	19/39
26	FREQUENCY AMS	00~~29 : *2-1	Alternate Modulation 1A/3A
27	INTENSITY	F1~~0F : -15~~15	1B/3B
28	FREQUENCY FINE	9D~~63 : -99~~99	1C/3C
29	LEVEL	00~~63 : 0~~99	1D/3D
30	RESONANCE MODULATION AMS	00~~29 : *2-1	Alternate Modulation 1E/3E
31	INTENSITY	9D~~63 : -99~~99	1F/3F
32~~37	(Reserved)	0	0 Fixed ----
4:Ring Modulation			ParamID = 42
00	WAVE INPUT WAVE	0:OSC2(1), 1:Sub OSC, 2:Noise, 3:Filter1, 4:Filter2	00/09
01	CARRIER WAVE	0:Saw, 1:Square, 2:Triangle, 3:Sine	01/0A
02	MODULATION DEPTH DEPTH	00~~63 : 0~~99	02/0B

## TRITON STUDIO V2 MIDI IMPLEMENTATION

03	DEPTH AMS 1	00~~29 : *2-1	Alternate Modulation	03/0C
04	INTENSITY	9D~~63 : -99~~99		04/0D
05	DEPTH AMS 2	00~~29 : *2-1	Alternate Modulation	05/0E
06	INTENSITY	9D~~63 : -99~~99		06/0F
07	TYPE	00~~01 : 1~~2		07/10
08	WAVE EDGE	00~~63 : 0~~99		08/11
09~~37	(Reserved)	0	0 Fixed	-----
5:Cross Modulation			ParamID = 43	
00	WAVE INPUT WAVE	0:OSC2(1), 1:Sub OSC, 2:Noise, 3:Filter1, 4:Filter2		00/08
01	CARRIER WAVE	0:Saw, 1:Square, 2:Triangle, 3:Sine		01/09
02	MODULATION DEPTH DEPTH	00~~63 : 0~~99		02/0A
03	DEPTH AMS 1	00~~29 : *2-1	Alternate Modulation	03/0B
04	INTENSITY	9D~~63 : -99~~99		04/0C
05	DEPTH AMS 2	00~~29 : *2-1	Alternate Modulation	05/0D
06	INTENSITY	9D~~63 : -99~~99		06/0E
07	WAVE EDGE	00~~63 : 0~~99		07/0F
08~~37	(Reserved)	0	0 Fixed	-----
6:Sync Modulation			ParamID = 44	
00	WAVE INPUT WAVE	0:OSC2(1), 1:Sub OSC, 2:Noise, 3:Filter1, 4:Filter2		00/03
01	SLAVE WAVE	0:Saw, 1:Square, 2:Triangle, 3:Sine		01/04
02	WAVE EDGE	00~~63 : 0~~99		02/05
03~~37	(Reserved)	0	0 Fixed	-----
7:Organ Model			ParamID = 45	
00	DRAWBAR 1 WAVE	0:Sine1, 1:Sine2, 2:Sine3, 3:Triangle		00/19
01	HARMONICS COARSE	00~~0F: 1('16)~~16('1)		01/1A
02	HARMONICS FINE	9D~~63 : -99~~99		02/1B
03	LEVEL	00~~63 : 0~~99		03/1C
04	LEVEL AMS	00~~29 : *2-1	Alternate Modulation	04/1D
05	INTENSITY	9D~~63 : -99~~99		05/1E
06	PERCUSSION LEVEL	00~~63 : 0~~99		06/1F
07	DRAWBAR 2 WAVE	0:Sine1, 1:Sine2, 2:Sine3, 3:Triangle		07/20
08	HARMONICS COARSE	00~~0F: 1('16)~~16('1)		08/21
09	HARMONICS FINE	9D~~63 : -99~~99		09/22
10	LEVEL	00~~63 : 0~~99		0A/23
11	LEVEL AMS	00~~29 : *2-1	Alternate Modulation	0B/24
12	INTENSITY	9D~~63 : -99~~99		0C/25
13	PERCUSSION LEVEL	00~~63 : 0~~99		0D/26
14	DRAWBAR 3 WAVE	0:Sine1, 1:Sine2, 2:Sine3, 3:Triangle		0E/27

## TRITON STUDIO V2 MIDI IMPLEMENTATION

15	HARMONICS COARSE	00~~0F: 1('16)~~16('1)		0F/28
16	HARMONICS FINE	9D~~63 : -99~~99		10/29
17	LEVEL	00~~63 : 0~~99		11/2A
18	LEVEL AMS	00~~29 : *2-1	Alternate Modulation	12/2B
19	INTENSITY	9D~~63 : -99~~99		13/2C
20	PERCUSSION LEVEL	00~~63 : 0~~99		14/2D
21	PERCUSSION GENERATOR TRIGGER MODE	0:Single, 1:Multi		15/2E
22	DECAY	00~~63 : 0~~99		16/2F
23	LEVEL AMS	00~~29 : *2-1	Alternate Modulation	17/30
24	INTENSITY	9D~~63 : -99~~99		18/31
25~~37	(Reserved)	0	0 Fixed	-----
8:E.Piano Model			ParamID = 46	
00	HAMMER FORCE	00~~63 : 0~~99		00/0E
01	VELOCITY CURVE	FF:Off, 0~~63 : 0~~99		01/0F
02	WIDTH	00~~63 : 0~~99		02/10
03	CLICK NOISE LEVEL	00~~63 : 0~~99		03/11
04	TONE GENERATOR DECAY	00~~63 : 0~~99		04/12
05	RELEASE	00~~63 : 0~~99		05/13
06	OVERTONE LEVEL	00~~63 : 0~~99		06/14
07	FREQUENCY	00~~63 : 0~~99		07/15
08	DECAY	00~~63 : 0~~99		08/16
09	PICKUP LOCATION	00~~63 : 0~~99		09/17
10	LOCATION AMS	00~~29 : *2-1	Alternate Modulation	0A/18
11	INTENSITY	9D~~63 : -99~~99		0B/19
12	LOW EQ FREQUENCY	00~~31 : 0~~49		0C/1A
13	GAIN	EE~~12 : -18~~18 [dB]		0D/1B
14~~37	(Reserved)	0	0 Fixed	-----
9:Brass Model			ParamID = 47	
00	INSTRUMENT TYPE	00~~02:Brass1~~3, 03~~04:Horn1~~2, 05:Reed Brass		00
01	JUMP BEND SW JS(+X)	0:OFF, 1:ON		01
	JS(-X)	0:OFF, 1:ON		02
02	BREATH PRESSURE MOD. EG	00~~04 : EG 1~~4, Ampeg	Alternate Modulation	03
03	INTENSITY	9D~~63 : -99~~99		04
04	AMS 1	00~~29 : *2-1	Alternate Modulation	05
05	INTENSITY	9D~~63 : -99~~99		06
06	AMS 2	00~~29 : *2-1	Alternate Modulation	07
07	INTENSITY	9D~~63 : -99~~99		08



## TRITON STUDIO V2 MIDI IMPLEMENTATION

08	(Reserved)	0	0 Fixed	----
09	LIP CHARACTER LIP	00~~63 : 0~~99		09
10	AMS	00~~29 : *2-1	Alternate Modulation	0A
11	INTENSITY	9D~~63 : -99~~99		0B
12~~14	(Reserved)			----
15	BELL CHARACTER TONE	00~~63 : 0~~99		0C
16	RESONANCE	00~~63 : 0~~99		0D
17	BREATH NOISE	00~~63 : 0~~99		0E
18~~27	(Reserved)			----
28	PEAKING EQ FREQUENCY	00~~31 : 0~~49		0F
29	Q	00~~1D : 0~~29		10
30	GAIN	EE~~12 : -18~~18 [dB]		11
31	STRENGTH	00~~63 : 0~~99		12
32~~37	(Reserved)			----
10:Reed Model			ParamID = 48	
00	INSTRUMENT TYPE	00~~02:Hard Sax 1~~3, 03~~04:Soft Sax 1~~2, 05~~06:Double Reed 1~~2, 07:Bassoon, 08:Clarinet, 09~~0A:Flute 1~~2, 0B:Pan Flute, 0C:Ocarina, 0D:Shakuhachi, 0E~~0F:Harmonica 1~~2, 10:Reed Synth		00
01	bit0 JUMP BEND SW JS(+X)	0:OFF, 1:ON		01
	bit1 JS(-X)	0:OFF, 1:ON		02
02	BREATH PRESSURE MOD. EG	00~~04 : EG 1~~4, AmpEG	Alternate Modulation	03
03	INTENSITY	9D~~63 : -99~~99		04
04	AMS 1	00~~29 : *2-1	Alternate Modulation	05
05	INTENSITY	9D~~63 : -99~~99		06
06	AMS 2	00~~29 : *2-1	Alternate Modulation	07
07	INTENSITY	9D~~63 : -99~~99		08
08~~12	(Reserved)			----
13	BREATH NOISE	00~~63 : 0~~99		09
14~~25	(Reserved)			----
26	REED CHARACTER AMS	00~~29 : *2-1	Alternate Modulation	0A
27	INTENSITY	9D~~63 : -99~~99		0B
28	BELL CHARACTER TONE	00~~63 : 0~~99		0C
29	RESONANCE	00~~63 : 0~~99		0D
30	PEAKING EQ FREQUENCY	00~~31 : 0~~49		0E
31	Q	00~~1D : 0~~29		0F
32	GAIN	EE~~12 : -18~~18 [dB]		10
33	(Reserved)			----
34	WAVE SHAPE OFFSET	9D~~63 : -99~~99		11

## TRITON STUDIO V2 MIDI IMPLEMENTATION

	b0~~6	SHAPE	00~~63 : 0~~99		12
35	bit7	TYPE	0:Clip, 1:Reso		13
36		SHAPE AMS	00~~29 : *2-1	Alternate Modulation	14
37		INTENSITY	9D~~63 : -99~~99		15
11:Plucked String Model				ParamID = 49	
00		ATTACK LEVEL	00~~63 : 0~~99		00
01		VELOCITY CTRL	9D~~63 : -99~~99		01
02		CURVE UP	00~~63 : 0~~99		02
03		VELOCITY CTRL	9D~~63 : -99~~99		03
04		CURVE DOWN	00~~63 : 0~~99		04
05		VELOCITY CTRL	9D~~63 : -99~~99		05
06		NOISE LEVEL	00~~63 : 0~~99		06
07		VELOCITY CTRL	9D~~63 : -99~~99		07
08		STRING PICKING POINT	00~~63 : 0~~99		08
09		POINT AMS	00~~29 : *2-1	Alternate Modulation	09
10		INTENSITY	9D~~63 : -99~~99		0A
11		DISPERSION	00~~63 : 0~~99		0B
12		DISPERSION AMS	00~~29 : *2-1	Alternate Modulation	0C
13		INTENSITY	9D~~63 : -99~~99		0D
14		DAMP	00~~63 : 0~~99		0E
15		DAMP KBD TRACK	9D~~63 : -99~~99		0F
16		DAMP AMS	00~~29 : *2-1	Alternate Modulation	10
17		INTENSITY	9D~~63 : -99~~99		11
18		DECAY	00~~63 : 0~~99		12
19		DECAY KBD TRACK	9D~~63 : -99~~99		13
20		RELEASE	00~~63 : 0~~99		14
21		HARMONICS HARMONICS POINT	00~~63 : 0~~99		15
22		HARMONICS CTRL	00~~29 : *2-1		16
23		INTENSITY	9D~~63 : -99~~99		17
24		PICKUP SW	0:OFF, 1:ON		18
25		LOCATION	00~~63 : 0~~99		19
26		LOCATION AMS	00~~29 : *2-1	Alternate Modulation	1A
27		INTENSITY	9D~~63 : -99~~99		1B
28		LOW EQ FREQUENCY	00~~31 : 0~~49		1C
29		GAIN	EE~~12 : -18~~18 [dB]		1D
30		LOW BOOST	00~~63 : 0~~99		1E
31~~37		(Reserved)	0	0 Fixed	----
12:Bowed String Model				ParamID = 4A	

## TRITON STUDIO V2 MIDI IMPLEMENTATION

00	BOW SPEED MOD. EG	00~~04 : EG 1~~4, AmpEG	Alternate Modulation	00
01	INTENSITY	9D~~63 : -99~~99		01
02	AMS 1	00~~29 : *2-1	Alternate Modulation	02
03	INTENSITY	9D~~63 : -99~~99		03
04	AMS 2	00~~29 : *2-1	Alternate Modulation	04
05	INTENSITY	9D~~63 : -99~~99		05
06	DIFFERENTIAL	0:OFF, 1:ON		06
07	BOW PRESSURE MOD. EG	00~~04 : EG 1~~4, AmpEG	Alternate Modulation	07
08	INTENSITY	9D~~63 : -99~~99		08
09	AMS	00~~29 : *2-1	Alternate Modulation	09
10	INTENSITY	9D~~63 : -99~~99		0A
11	ROSIN	00~~63 : 0~~99		0B
12	STRING BOWING POINT	00~~63 : 0~~99		0C
13	POINT AMS	00~~29 : *2-1	Alternate Modulation	0D
14	INTENSITY	9D~~63 : -99~~99		0E
15	DAMP	00~~63 : 0~~99		0F
16	DAMP KBD TRACK KEY	00~~7F : C-1~~G9		10
17	RAMP LOW	9D~~63 : -99~~99		11
18	RAMP HIGH	9D~~63 : -99~~99		12
19	DAMP AMS	00~~29 : *2-1	Alternate Modulation	13
20	INTENSITY	9D~~63 : -99~~99		14
21	DISPERSION	00~~63 : 0~~99		15
22	DISPERSION AMS	00~~29 : *2-1	Alternate Modulation	16
23	INTENSITY	9D~~63 : -99~~99		17
24	REFLECTION	00~~63 : 0~~99		18
25	REFLECTION AMS	00~~29 : *2-1	Alternate Modulation	19
26	INTENSITY	9D~~63 : -99~~99		1A
27	PEAKING EQ FREQUENCY	00~~31 : 0~~49		1B
28	Q	00~~1D : 0~~29		1C
29	GAIN	EE~~12 : -18~~18 [dB]		1D
30~~37	(Reserved)			----

\*2-1 : Alternate Modulation Source for MOSS

00 : Off,	01 : EG 1,	02 : EG 2,	03 : EG 3,
04 : EG 4,	05 : Amp EG,	06 : LFO 1,	07 : LFO 2,
08 : LFO 3,	09 : LFO 4,	0A : Portamento,	0B : Note No. Linear,
0C : Note No. Exp.,	0D : Note Split High,	0E : Note Split Low,	0F : Velocity Soft,
10 : Velocity Med.,	11 : Velocity Hard,	12 : After Touch,	13 : JS X,
14 : JS +Y:CC#01,	15 : JS -Y:CC#02,	16 : JS +Y & AT/2,	17 : JS -Y & AT/2,
18 : Pedal:CC#04,	19 : Ribbon:CC#16,	1A : Ribbon +X,	1B : Ribbon -X,
1C : Slider:CC#18,	1D : KnobMod1:#17,	1E : KnobMod2:#19,	1F : KnobMod3:#20,
20 : KnobMod4:#21,	21 : KnobMod1 [+],	22 : KnobMod2 [+],	23 : KnobMod3 [+],
24 : KnobMod4 [+],	25 : Damper:#64,	26 : SW 1:CC#80,	27 : SW 2:CC#81,
28 : Foot SW:#82,	29 : MIDI:CC#83		

# TRITON STUDIO V2 MIDI IMPLEMENTATION

PARA No. : Parameter ID & SUB ID [HEX] for PARAMETER CHANGE. n : Timbre No.(1~~8:T1~~T8)

No. (bit)	PARAMETER	DATA(Hex) : VALUE	DESCRIPTION	PARA No.
00 : 15	COMBI. NAME (Head) : COMBI. NAME (Tail)	20~~7F		----
INSERT EFFECT 1 PARAMETERS				
16 : 31	Insert Effect 1 Parameter Structure (16Bytes) (See midifx.txt.)			0D,?? : 0D,??
32	Effect Type	00~~59 , 00:No Effect ~ 89:Reverb - Gate		0C,00
b0~~b5	Control Channel	00~~0F:MIDI Channel 1~~16, 10:Global Channel, 11:All Routed		0C,22
33 b6	ON/OFF	0:Off, 1:ON		0C,05
b7	CHAIN	0:Not chain, 1:Chain		0C,1E
34	( Reserved )			----
35	( Reserved )			----
36	PAN	00~~7F : L000~~R127		0C,0A
37	BUS Select	00:L/R, 01~~04:1~~4, 05:1/2, 06:3/4, 07:Off		0C,0F
38	Send 1 Level	00~~7F : 00~~127		0C,14
39	Send 2 Level	00~~7F : 00~~127		0C,19
INSERT EFFECT 2 PARAMETERS				
40 : 55	Insert Effect 2 Parameter Structure (16Bytes) (See midifx.txt.)			0E,?? : 0E,??
56	Effect Type	00~~66 , 00:No Effect ~ 102:Hold Delay		0C,01
57 : 63	INSERT EFFECT 2 PARAMETERS ( Same as INSERT EFFECT 1 (33 ~ 39) 7 Bytes) SID : SID of 'INSERT EFFECT 1' + 1			0C,06 : 0C,1F
INSERT EFFECT 3 PARAMETERS				
64 : 79	Insert Effect 3 Parameter Structure (16Bytes) (See midifx.txt.)			0F,?? : 0F,??
80	Effect Type	00~~66 , 00:No Effect ~ 102:Hold Delay		0C,02
81 : 87	INSERT EFFECT 3 PARAMETERS ( Same as INSERT EFFECT 1 (33 ~ 39) 7 Bytes) SID : SID of 'INSERT EFFECT 1' + 2			0C,07 : 0C,20
INSERT EFFECT 4 PARAMETERS				
88 : 103	Insert Effect 4 Parameter Structure (16Bytes) (See midifx.txt.)			10,?? : 10,??
104	Effect Type	00~~66 , 00:No Effect ~ 102:Hold Delay		0C,03
105 : 111	INSERT EFFECT 4 PARAMETERS ( Same as INSERT EFFECT 1 (33 ~ 39) 7 Bytes) SID : SID of 'INSERT EFFECT 1' + 3			0C,08 : 0C,21
INSERT EFFECT 5 PARAMETERS				
112 : 127	Insert Effect 5 Parameter Structure (16Bytes) (See midifx.txt.)			11,?? : 11,??
128 : 135	INSERT EFFECT 5 PARAMETERS ( Same as INSERT EFFECT 1 (32 ~ 39) 8 Bytes except 'CHAIN' parameter) SID : SID of 'INSERT EFFECT 1' + 4			0C,04 : 0C,1D
MASTER EFFECT PARAMETERS				

## TRITON STUDIO V2 MIDI IMPLEMENTATION

136	:	MFX1 Effect Parameter Structure (16Bytes)		13,??
151	:	(See midifx.txt.)		13,??
152		MFX1 Effect Type	00~~59 , 00:No Effect ~~ 89:Reverb - Gate	12,00
153	b0~~b5	Control Channel	00~~0F:MIDI Channel 1~~16, 10:Global Channel	12,0A
	b6	MFX1 ON/OFF	0:Off, 1:ON	12,02
	b7	( Reserved )		----
154		( Reserved )		----
155		( Reserved )		----
156	:	MFX2 Effect Parameter Structure (16Bytes)		14,??
171	:	(See midifx.txt.)		14,??
172		MFX2 Effect Type	00~~59 , 00:No Effect ~~ 89:Reverb - Gate	12,01
173	b0~~b5	Control Channel	00~~0F:MIDI Channel 1~~16, 10:Global Channel	12,0B
	b6	MFX2 ON/OFF	0:Off, 1:ON	12,03
	b7	( Reserved )		----
174		( Reserved )		----
175		( Reserved )		----
176		MFX1 Return Level	00~~7F : 00~~127	12,04
177		MFX2 Return Level	00~~7F : 00~~127	12,05
178	b0~~b1	MFX Chain Signal	0:LR Mix, 1:L Only, 2:R Only	12,08
	b2	MFX Chain Direction	0:MFX1 -> MFX2, 1:MFX2 -> MFX1	12,07
	b3	MFX Chain ON/OFF	0:Chain Off, 1:On	12,06
179		MFX Chain Level	00~~7F : 00~~127	12,09
180		Master EQ Low Gain	EE~~12 : -18.0~~+18.0dB (0.5dB step)	15,00
181		Master EQ Mid Gain	EE~~12 : -18.0~~+18.0dB (0.5dB step)	15,01
182		Master EQ High Gain	EE~~12 : -18.0~~+18.0dB (0.5dB step)	15,02
183		Master EQ Low Fc	00~~31 , 0:20Hz ~~ 49:1.00kHz	15,03
184		Master EQ Mid Fc	00~~61 , 0:300Hz ~~ 97:10.00kHz	15,04
185		Master EQ High Fc	00~~C3 , 0:500Hz ~~ 195:20.00kHz	15,05
186		Master EQ Mid Q	00~~5F , 0:0.5 ~~ 95:10.0 (0.1 step)	15,06
187		Master EQ Low DMod	00~~1F : Off~Tempo(See '*1' in midifx.txt)	15,07
188		Master EQ High DMod	00~~1F : Off~Tempo(See '*1' in midifx.txt)	15,08
189		Mst.EQ Ctrl.Channel	00~~0F:MIDI Channel 1~~16, 10:Global Channel	12,0C
190		Arp.Gate Control		----
191		Arp.Velocity Control		----
ARPEGGIATOR PARAMETERS				
192		TEMPO	28~~F0 : 40~~240	09,00
193	bit0	SWITCH	0:OFF, 1:ON	09,01
	bit1	ARPEGGIATOR RUN A	0:OFF, 1:ON	09,02
	bit2	ARPEGGIATOR RUN B	0:OFF, 1:ON	09,03
ARPEGGIATOR A				
194		PATTERN NO.	00~~1FF : 0~~511      0~~1FF : 0~~511      **1-8	0A,00

## TRITON STUDIO V2 MIDI IMPLEMENTATION

195	b0~~1	OCTAVE	00~~03 : 1~~4		0A,02
	b2~~4	RESOLUTION	0:16T, 1:16, 2:8T, 3:8, 4:4T, 5:4		0A,01
	b5	PATTERN NO. MSB	0 or 1	0~~1FF : 0~~511      **1-8	0A,00
196		GATE	00~~64 : 0~~100[%], 65:Step		0A,03
197		VELOCITY	01~~7F : 1~~127, 80:Key, 81:Step		0A,04
198		SWING	9C~~64 : -100~~100		0A,05
199	bit0	SORT	0:OFF, 1:ON		0A,06
	bit1	LATCH	0:OFF, 1:ON		0A,07
	bit2	KEY SYNC.	0:OFF, 1:ON		0A,08
	bit3	KEYBOARD	0:OFF, 1:ON		0A,09
200		TOP KEY	00~~7F : C-1~~G9		0A,0A
201		BOTTOM KEY	00~~7F : C-1~~G9		0A,0B
202		TOP VELOCITY	01~~7F : 1~~127		0A,0C
203		BOTTOM VELOCITY	01~~7F : 1~~127		0A,0D
ARPEGGIATOR B					
204					0B,00
:		Same as ARPEGGIATOR A (194~~203)			:
213		(10 Bytes)			0B,0D
COMMON PARAMETERS					
214	b0~~3	CATEGORY	00~~0F : 0~~15		00,00
	b4~~7	MOSS BUS SELECT	00~~07 : TIMBRE1~~8		00,0F
215		SCALE TYPE	00~~1A :      **1-1		00,01
216		SCALE KEY	00~~0B : C~~B		00,02
217		RANDOM INTENSITY	00~~07 : 0~~7	Normal = 0	00,03
218	b0~~5	SW 1 ASSIGN TYPE	00~~0C :      **1-2		00,04
	bit6	SW1 TOGGLE/MOMENTARY	0:Toggle, 1:Momentary		00,08
	bit7	SW 1 ON/OFF	0:OFF, 1:ON		00,06
219	b0~~5	SW 2 ASSIGN TYPE	00~~0C :      **1-2		00,05
	bit6	SW2 TOGGLE/MOMENTARY	0:Toggle, 1:Momentary		00,09
	bit7	SW 2 ON/OFF	0:OFF, 1:ON		00,07
220	b0~~6	KNOB 1 ASSIGN TYPE	00~~7C :      **1-3		00,0A
	bit7	REALTIME CONTROLS	0:A, 1:B		00,0E
221		KNOB 2 ASSIGN TYPE	00~~7C :      **1-3		00,0B
222		KNOB 3 ASSIGN TYPE	00~~7C :      **1-3		00,0C
223		KNOB 4 ASSIGN TYPE	00~~7C :      **1-3		00,0D
TIMBRE 1 PARAMETER					
224		PROGRAM NO.	00~~7F : 00~~127		n,00
225		PROGRAM BANK	00~~10 : Bank A~~g(d)		n,00
226	b0~~b4	MIDI CHANNEL	00~~0F : MIDI Channel 1~~16, 10:Global Channel		n,04
	b5~~b7	STATUS	0:INT, 1:Off, 2:EXT, 3:EX2		n,03
227		BANK SELECT MSB	00~~7F : 00~~127	Available only when status is EXT2.	n,05
228		BANK SELECT LSB	00~~7F : 00~~127		n,06

## TRITON STUDIO V2 MIDI IMPLEMENTATION

229	VOLUME	00~~7F : 00~~127	n,02
230	PITCH BEND RANGE	E7:PROG, E8~~18 : -24~~24	n,0C
231	TRANPOSE	E8~~18 : -24~~24	n,0A
232	DETUNE MSB	FB50~~4B0: -1200~~1200	n,0B
233	DETUNE LSB		
234	DELAY START	00~~60,61 : **1-5	n,0D
235	PAN	00:RND, 01~~7F : L001~~R127	n,01
236	SEND 1 LEVEL	00~~7F : 00~~127	n,29
237	SEND 2 LEVEL	00~~7F : 00~~127	n,2A
238	b1~~3   DRUMKIT IFX4 Patch	0:IFX1, 1:IFX2, 2:IFX3, 3:IFX4, 4:IFX5, 5:L/R	n,2E
	b4~~6   DRUMKIT IFX5 Patch		n,2F
	bit0   DRUMKIT IFX3 Patch		n,2D
	b6~~7		
239	b0~~2   DRUMKIT IFX1 Patch		n,2B
	b3~~5   DRUMKIT IFX2 Patch		n,2C
240	BUS SELECT	0:DKit, 1:L/R, 2~~6:IFX1~~5, 7~~A:1~~4, B:1/2, C:3/4, D:Off	n,28
241	bit0   PROGRAM CHANGE FILT	0:DIS, 1:ENA	n,0F
	bit1   AFTER TOUCH FILTER	0:DIS, 1:ENA	n,10
	bit2   DAMPER FILTER	0:DIS, 1:ENA	n,11
	bit3   PORTAMENTO FILTER	0:DIS, 1:ENA	n,12
	bit4   JS(X) AS AMS FILTER	0:DIS, 1:ENA	n,13
	bit5   JS(Y+) FILTER	0:DIS, 1:ENA	n,14
	bit6   JS(Y-) FILTER	0:DIS, 1:ENA	n,15
	bit7   RIBBON FILTER	0:DIS, 1:ENA	n,16
242	bit0   ASSIGN KNOB 1 FILTER	0:DIS, 1:ENA	n,17
	bit1   ASSIGN KNOB 2 FILTER	0:DIS, 1:ENA	n,18
	bit2   ASSIGN KNOB 3 FILTER	0:DIS, 1:ENA	n,19
	bit3   ASSIGN KNOB 4 FILTER	0:DIS, 1:ENA	n,1A
	bit4   ASSIGN SW 1 FILTER	0:DIS, 1:ENA	n,1B
	bit5   ASSIGN SW 2 FILTER	0:DIS, 1:ENA	n,1C
	bit6   FOOT PEDAL/SW FILTER	0:DIS, 1:ENA	n,1D
	bit7   OTHER CONTROL FILTER	0:DIS, 1:ENA	n,1E
243	b0,1   FORCE OSC MODE	0:Program, 1:Poly, 2:Mono, 3:Mono Legate	n,07
	b2,3   OSC SELECT	0:BOTH, 1:OSC1, 2:OSC2	n,08
	b4,5   ARPEGGIATOR ASSIGN	0:OFF, 1:A, 2:B	n,27
	bit6   USE PROGRAM'S SCALE	0:DIS, 1:ENA	n,0E
244	PORTAMENT TIME	FF:PRG, 00:Off, 01~~7F : 1~~127	n,09
245	KEY Z TOP	00~~7F : C-1~~G9	n,1F
246	KEY Z BOTTOM	00~~7F : C-1~~G9	n,22
247	b0~~3   KEY Z TOP SLOPE	0~~F: **3-1	n,20
	b4~~7   KEY Z BOTTOM SLOPE	0~~F: **3-1	n,21

## TRITON STUDIO V2 MIDI IMPLEMENTATION

248	VEL Z TOP	01~~7F : 1~~127	n,23
249	VEL Z BOTTOM	01~~7F : 1~~127	n,26
250	b0~~3 VEL Z TOP SLOPE	0~~F : 0~~120 (Vel fade slope = Para value * 8)	n,24
	b4~~7 VEL Z BOTTOM SLOPE		n,25
251	MOSS VOICE	00~~06: 0~~6	n,30
TIMBRE 2~~8 PARAMETERS			
252	Same as TIMBRE 1 (224~~251) (28 * 7 = 196 Bytes)		n,00
:			:
447			n,30

\*\*3-1 : 0 : 0                      1 : 1 (Semi tone)                      2 : 2                      3 : 3  
           4 : 4                      5 : 6 (0.5 Oct)                      6 : 8                      7 : 10  
           8 : 12 (1 Oct)            9 : 18 (1.5 Oct)                      A : 24 (2 Oct)            B : 30 (2.5 Oct)  
           C : 36 (3 Oct)            D : 48 (4 Oct)                      E : 60 (5 Oct)            F : 72 (6 Oct)

[ TABLE 4 ] GLOBAL PARAMETERS  
No. : No. in the GLOBAL DUMP DATA.

2002.02.20

No. (bit)	PARAMETER	DATA(Hex) : VALUE	DESCRIPTION
GLOBAL PARAMETER			
00	MASTER TUNE	CE~~32 : -50~~50[Cent]	
01	KEY TRANSPOSE	F4~~0C : -12~~12	
02	VELOCITY CURVE	0~~7 : 1~~8	
03	AFTER TOUCH CURVE	0~~7 : 1~~8	
04	bit0 FOOT SW POLARITY	0:-, 1:+	
	bit1 DAMPER POLARITY	0:-, 1:+	
	bit2 CONVERT POSITION	0:PreMIDI, 1:PostMIDI	
	bit3 PROG AUTO ARP	0:OFF, 1:ON	
	bit4 COMBI AUTO ARP	0:OFF, 1:ON	
05	FOOT SW ASSIGN	00~~14 :            **4-1	
06	FOOT PEDAL ASSIGN	00~~13 :            **4-2	
07	bit0,1 SYSTEM CLOCK	00~~03 :            **4-3	
	bit3 AUTO OPTIMIZE RAM	0:OFF, 1:ON	
	bit4,5 S/P DIF SAMPLE RATE	00~~02 :            **4-4	
	bit7 WAV FILE PLAY LEVEL	0:Normal,1:High(+12dB)	
08 : 199	USER SCALE (Octave) ( 12*16 Bytes )	9D~~63 : -99~~99 [Cent]	
200 : 327	USER SCALE ( All Notes ) ( 128 Bytes )	9D~~63 : -99~~99 [Cent]	
328 : 583	PROG CATEGORY NAME ( 16*16 Bytes )	20~~7F [ ASCII CODE ]	
584 : 839	COMBI CATEGORY NAME ( 16*16 Bytes )	20~~7F [ ASCII CODE ]	
AUDIO INPUT 1			
840	LEVEL	00~~7F : 00~~127	
841	PAN	00~~7F : L000~~R127	
842	SEND 1 LEVEL	00~~7F : 00~~127	



# TRITON STUDIO V2 MIDI IMPLEMENTATION

843	SEND 2 LEVEL	00~~7F : 00~~127
844	BUS SELECT	00:L/R,01~~05:IFX1~~5,06~~09:1~~4,0A:1/2,0B:3/4,0C:Off
AUDIO INPUT 2		
845	Same as AUDIO INPUT 1 (840~~844) (5 Bytes)	
:		
849		
S/P DIF INPUT 1		
850	Same as AUDIO INPUT 1 (840~~844) (5 Bytes)	
:		
854		
S/P DIF INPUT 2		
855	Same as AUDIO INPUT 1 (840~~844) (5 Bytes)	
:		
859		
mLAN INPUT 1		
860	Same as AUDIO INPUT 1 (840~~844) (5 Bytes)	
:		
864		
mLAN INPUT 2		
865	Same as AUDIO INPUT 1 (840~~844) (5 Bytes)	
:		
869		

\*\*4-1 : 0 : OFF  
 4 : SOFT:CC#67  
 8 : SONG START/STOP  
 C : JS-Y:CC#02  
 10 : KNOB 2  
 14 : SW 2  
 1 : FOOT SW:CC#82  
 5 : ARPEGGIO SW  
 9 : SONG PUNCH IN/OUT  
 D : RIBBON:CC#16  
 11 : KNOB 3  
 2 : PORTAMENTO SW:CC#65  
 6 : PROGRAM UP  
 A : CUE REPEAT CONTROL  
 E : SLIDER:CC#18  
 12 : KNOB 4  
 3 : SOSTENUTO:CC#66  
 7 : PROGRAM DOWN  
 B : JS+Y:CC#01  
 F : KNOB 1  
 13 : SW 1

\*\*4-2 : 0 : OFF  
 4 : VOLUME:CC#07  
 8 : FX CONTROL 1:CC#12  
 C : JS+Y:CC#01  
 10 : KNOB 1  
 1 : MASTER VOLUME  
 5 : POST IFX PAN:CC#08  
 9 : FX CONTROL 2:CC#13  
 D : JS-Y:CC#02  
 11 : KNOB 2  
 2 : FOOT PEDAL:CC#04  
 6 : PAN:CC#10  
 A : MFX SEND 1:CC#93  
 E : RIBBON:CC#16  
 12 : KNOB 3  
 3 : PORTAMENTO TIME:CC#05  
 7 : EXPRESSION:CC#11  
 B : MFX SEND 2:CC#91  
 F : SLIDER:CC#18  
 13 : KNOB 4

\*\*4-3 : 0 : INTERNAL  
 1 : WORD CLOCK  
 2 : mLAN  
 3 : S/P DIF

\*\*4-4 : 0 : 48kHz  
 1 : 96kHz(NORMAL)  
 2 : 96kHz(HI ENHANCED)

[ TABLE 5 ] Parameter No. at COMBINATION PLAY mode  
n(=0~~7) : Timbre 1~~8

PARAMETER	DATA(Hex) : VALUE	DESCRIPTION	PARA No.
TIMBRE PARAMETER			
BANK/PROGRAM	00~~87F : A000~~g(d)128		n,00
PAN	00:RND, 01~~7F : L001~~R127		n,01
VOLUME	00~~7F : 0~~127		n,02
STATUS	0:INT, 1:Off, 2:EXT, 3:EX2		n,03
ARPEGGIO PARAMETER			
TEMPO	28~~F0 : 40~~240		08,00
SWITCH	0:OFF, 1:ON		08,01
ARPEGGIATOR RUN A	0:OFF, 1:ON		08,02
ARPEGGIATOR RUN B	0:OFF, 1:ON		08,03
GATE	C0~~3F : -64~~63	Arpeggiator gate knob parameter	08,04
VELOCITY	C0~~3F : -64~~63	Arpeggiator velocity knob parameter	08,05
ARPEGGIATOR-A PARAMETER			

## TRITON STUDIO V2 MIDI IMPLEMENTATION

PATTERN NO.	00~1FF : 0~511	09,00
RESOLUTION	0:16T, 1:16, 2:8T, 3:8, 4:4T, 5:4	09,01
OCTAVE	00~03 : 1~4	09,02
SORT	0:OFF, 1:ON	09,06
LATCH	0:OFF, 1:ON	09,07
KEY SYNC.	0:OFF, 1:ON	09,08
KEYBOARD	0:OFF, 1:ON	09,09
ARPEGGIATOR-B PARAMETER		
Same as ARPEGGIATOR-A PARAMETER		0A,00~09
SWITCH PARAMETER		
SW 1 ON/OFF	0:OFF, 1:ON	0B,00
SW 2 ON/OFF	0:OFF, 1:ON	0B,01
REALTIME CONTROLS	0:A, 1:B	0B,02

[ TABLE 6 ] Parameter No. at PROGRAM PLAY mode

PARAMETER	DATA(Hex) : VALUE	DESCRIPTION	PARA No.
PERFORMANCE EDITOR			
OCTAVE	FD~~03 : -3~~3		00,00
PITCH STRETCH	F4~~0C : -12~~12	Only for PCM program	00,01
OSC BALANCE	F6~~0A : -10~~10		00,02
AMP LEVEL	F6~~0A : -10~~10		00,03
ATTACK TIME	F6~~0A : -10~~10		00,04
DECAY TIME	F6~~0A : -10~~10		00,05
IFX BALANCE	F6~~0A : -10~~10		00,06
MFx BALANCE	F6~~0A : -10~~10		00,07
ARPEGGIATOR PARAMETER Under Parameter's right side of '/' is Parameter ID of EXB-MOSS.			
TEMPO	28~~F0 : 40~~240		01/03,00
SWITCH	0:OFF, 1:ON		01/03,01
GATE	C0~~3F : -64~~63	Arpeggiator gate knob parameter	01/03,02
VELOCITY	C0~~3F : -64~~63	Arpeggiator velocity knob parameter	01/03,03
PATTERN NO.	00~1FF : 0~511		02/04,00
RESOLUTION	0:16T, 1:16, 2:8T, 3:8, 4:4T, 5:4		02/04,01
OCTAVE	00~03 : 1~4		02/04,02
SORT	0:OFF, 1:ON		02/04,06
LATCH	0:OFF, 1:ON		02/04,07
KEY SYNC.	0:OFF, 1:ON		02/04,08
KEYBOARD	0:OFF, 1:ON		02/04,09
SWITCH PARAMETER Under Parameter's right side of '/' is Parameter ID of EXB-MOSS.			
SW 1 ON/OFF	0:OFF, 1:ON		05/06,00
SW 2 ON/OFF	0:OFF, 1:ON		05/06,01
REALTIME CONTROLS	0:A, 1:B		05/06,02

## TRITON STUDIO V2 MIDI IMPLEMENTATION

[ TABLE 7 ] 1 DRUMKIT PARAMETERS  
No. : No. in the DRUMKIT DUMP DATA.

2002.01.24

No. (bit)	PARAMETER	DATA(Hex) : VALUE	DESCRIPTION	PARA No.
00 : 15	DRUMKIT NAME (Head) : DRUMKIT NAME (Tail)	20~~7F		----
KEY=C-1 PARAMETERS				
16	HIGHER BANK	0:ROM, 1:RAM, ~~???	??? is depend on PCM option.	00/0B
bit0	HIGHER START OFFSET	0:OFF, 1:ON		02/0D
17 bit1	HIGHER REVERSE	0:OFF, 1:ON		03/0E
18	HIGH SAMPLE NO(MSB)	00~~1A0 : 00~~416	Higher Vel's Drumsample	01/0C
19	HIGH SAMPLE NO(LSB)			
20	HIGHER LEVEL	9D~~63 : -99~~99		04/0F
21	HIGHER TRANSPOSE	C0~~3F : -64~~63		05/10
22	HIGHER TUNE	9D~~63 : -99~~99		06/11
23	HIGHER ATTACK LEVEL	C0~~3F : -64~~63		07/12
24	HIGHER DECAY LEVEL	C0~~3F : -64~~63		08/13
25	HIGHER CUTOFF LEVEL	C0~~3F : -64~~63		09/14
26	HIGH RESONANCE LEVEL	C0~~3F : -64~~63		0A/15
27	( RESERVED )			----
28 : 39	LOWER Same as HIGHER (16~~27) (12 Bytes)	(Above Parameter's right side of '/' is PARA No. of LOWER.)		
40	PAN	00:RND, 01~~7F : L001~~R127		16
41	BUS SELECT	00:L/R, 01~~05:IFX1~~5, 06~~09:1~~4, 0A:1/2, 0B:3/4, 0C:Off		17
42	SEND 1 LEVEL	00~~7F: 00~~127		18
43	SEND 2 LEVEL	00~~7F: 00~~127		19
44	EXCLUSIVE GROUP	00:Off, 01~~7F : 001~~127		1A
bit0	VOICE ASSIGN	0:OFF, 1:ON		1B
bit1	SINGLE TRIGGER	0:OFF, 1:ON		1C
45 bit2	RECEIVE NOTE ON	0:DIS, 1:ENA		1D
bit3	RECEIVE NOTE OFF	0:DIS, 1:ENA		1E
46	VEL SAMPLE SW	01~~7F : 01~~127	For DRUMSAMPLE SELECT by Vel	1F
47	( RESERVED )			----
KEY=C#-1~~G9 PARAMETERS				
48 : 4111	Same as KEY=C-1 (16~~47) (127 * 32 = 4064 Bytes)			00 : 1F

[ TABLE 8 ] 1 ARPEGGIO PATTERN PARAMETERS  
No. : No. in the ARPEGGIO PATTERN DUMP DATA.

1999.05.11

No. (bit)	PARAMETER	DATA(Hex) : VALUE	DESCRIPTION	PARA No.
00 : 15	ARP. NAME (Head) : ARP. NAME (Tail)	20~~7F		----
b0~~1	OCTAVE MOTION	0:Up, 1:Down, 2:Both, 3:Parallel		01

## TRITON STUDIO V2 MIDI IMPLEMENTATION

16	b2~~3	TYPE	0:As Played,1:As Played(Fill),2:Running Up,3:Up&Down	00
	bit4	TONE MODE	0:Normal, 1:Fixed Note	03
	bit5	FIXED NOTE MODE	0:As Played, 1:All Tones	04
17		LENGTH	01~~30 : 1~~48	02
18		( RESERVED )		----
19		( RESERVED )		----
20		TONE 00 NOTE NO	00~~7F : C-1~~G9	05
21		TONE 01~~11 NOTE NO		05
:		Same as TONE 00 NOTE NO		:
31		(11 Bytes)		05
STEP 01 PARAMETERS				
32		PITCH OFFSET	D0~~30 : -48~~48	06
33		GATE	0:Off, 01~~64 : 1~~100[%], 65:Legato	07
34		VELOCITY	01~~7F : 1~~127, 80:Key	08
35		FLAM	9D~~63 : -99~~99	09
36	b0~~3	TONE8~~11	0:DIS, 1:ENA	0A
37	b0~~7	TONE0~~7	0:DIS, 1:ENA	15
STEP 02~~48 PARAMETERS				
38				06
:		Same as STEP 01 (32~~37)		:
319		(6 * 47 = 282 Bytes)		15
----		ARPEGGIATOR SELECT	0:A, 1:B      It's not dump data.	16

[ TABLE 9 ]      Arpegiator Parameter No. at GLOBAL

PARAMETER	DATA(Hex) : VALUE	DESCRIPTION	PARA No.
PATTERN NO.	00~~1FF : 0~~511		68,00
RESOLUTION	0:16T, 1:16, 2:8T, 3:8, 4:4T, 5:4		68,01
OCTAVE	00~~03 : 1~~4		68,02
SORT	0:OFF, 1:ON		68,06
LATCH	0:OFF, 1:ON		68,07
KEY SYNC.	0:OFF, 1:ON		68,08
KEYBOARD	0:OFF, 1:ON		68,09

[ TABLE 10 ]      SEQUENCE DATA PARAMETERS      1999.05.12

00	EVENT DATA START ADDRESS(MSB)
:	: (4 Bytes)
03	EVENT DATA START ADDRESS(LSB)
04	EVENT DATA FREE AREA START ADDRESS(MSB)
:	: (4 Bytes)
07	EVENT DATA FREE AREA START ADDRESS(LSB)
08	SONG 00 EVENT DATA ADDRESS(MSB)
:	: (4 Bytes)
11	SONG 00 EVENT DATA ADDRESS(LSB)
12	SONG 001~~199, EVENT DATA ADDRESS
:	Same as SONG 00 EVENT (08~~11)
807	( 4 * 199 = 796 Bytes)
808	CURRENT SONG NO.      00~~C7 : 00~~199
809	CURRENT PAT NO.      00~~95 : 00~~149

810	CURRENT FX SONG NO.	00~~C7 : 00~~199
811	VALID SONG	00~~C8 : 00~~200
812	VALID SONG NO.	00~~C7 : 00~~199
:		
1011	(200 Bytes)	

[ TABLE 11 ] 1 CUE LIST DATA 1999.05.13

CUE LIST		
00	CUE LIST NAME (Head)	20~~7F
:	:	
15	CUE LIST NAME (Tail)	
16	TEMPO	28~~F0 : 40~~240
17	TEMPO MODE	0:AUTO, 1:MANUAL
18	( RESERVED )	
19	( RESERVED )	
STEP 01		
20	SONG NO.	0~~C7 : S000~~S199 FE : Continue to step01 FF : End
b0~~6	REPEAT	00~~3F:1~~64, 7F:FS
21	bit7	Load FX
		0:OFF, 1:ON
STEP 02~~100		
22	Same as STEP 01 (20~~21) ( 2 * 99 = 198 Bytes)	
:		
219		

[ TABLE 12 ] 1 SONG SEQUENCE DATA 2002.02.19

No. (bit)	PARAMETER	DATA(Hex) : VALUE	DESCRIPTION	PARA No.
00	SONG NAME (Head)	20~~7F		----
:	:			
15	SONG NAME (Tail)			
INSERT EFFECT PARAMETERS				
16	FX1~~5 (24Bytes * 5) (120 Bytes)			36,00
:				:
135				3B,??
MASTER EFFECT PARAMETERS				
136	FX1~~2 (20Bytes * 2) Same as COMBI.MASTER EFFECT (136~~191) (56 Bytes)			3C,00
:				:
191				3F,??
ARPEGGIATOR PARAMETERS				
192	Same as COMBI.ARPEGGIATOR (192~~213) (22 Bytes)			33,00
:				:
213				35,0D
COMMON PARAMETERS				
b0~~3	(RESERVED)			----
214	b4~~7	MOSS BUS SELECT	00~~07 : TIMBRE1~~8	00,0E
215	SCALE TYPE	00~~1A :	**1-1	00,00
216	SCALE KEY	00~~0B :	C~~B	00,01
217	RANDOM INTENSITY	00~~07 : 0~~7	Normal = 0	00,02
b0~~5	SW 1 ASSIGN TYPE	00~~0C :	**1-2	00,03

## TRITON STUDIO V2 MIDI IMPLEMENTATION

218	bit6	SW1 TOGGLE/MOMENTARY	0:Toggle, 1:Momentary		00,07
	bit7	SW 1 ON/OFF	0:OFF, 1:ON		----
219	b0~~5	SW 2 ASSIGN TYPE	00~~0C : **1-2		00,04
	bit6	SW2 TOGGLE/MOMENTARY	0:Toggle, 1:Momentary		00,08
	bit7	SW 2 ON/OFF	0:OFF, 1:ON		----
220	b0~~6	KNOB 1 ASSIGN TYPE	00~~7C : **1-3		00,09
	bit7	REALTIME CONTROLS	0:A, 1:B		00,0D
221		KNOB 2 ASSIGN TYPE	00~~7C : **1-3		00,0A
222		KNOB 3 ASSIGN TYPE	00~~7C : **1-3		00,0B
223		KNOB 4 ASSIGN TYPE	00~~7C : **1-3		00,0C
TRACK 1~~16 PARAMETERS					
224	:	Same as TIMBRE 1 (224~~251)			n,00
671		(28 * 16 = 448 Bytes)			n,30
SONG CONTROL DATA					
672		RPPR ON/OFF	0:OFF, 1:ON		----
673		TRACK SELECT	0~~F,10 : TRK01~~16		----
674		( RESERVED )			----
675		( RESERVED )			----
676		METER	10~~3F **12-1		----
677		TEMPO	28~~F0 : 40~~240		----
678		METRONOME LEVEL	00~~7F : 00~~127		----
679		METRONOME BUS SELECT	0:L/R,1:L,2:R,3~~6:1~~4, 7:1/2,8:3/4		----
680		METRONOME PRECOUNT	00~~02 : 0~~2		----
681		TEMPO MODE	0:AUTO, 1:MANUAL		----
682	bit0	TRACK 9 MODE	0:PLAY, 1:MUTE **12-2		19,00
	bit1	TRACK 10 MODE	0:PLAY, 1:MUTE **12-2		1A,00
	bit2	TRACK 11 MODE	0:PLAY, 1:MUTE **12-2		1B,00
	bit3	TRACK 12 MODE	0:PLAY, 1:MUTE **12-2		1C,00
	bit4	TRACK 13 MODE	0:PLAY, 1:MUTE **12-2		1D,00
	bit5	TRACK 14 MODE	0:PLAY, 1:MUTE **12-2		1E,00
	bit6	TRACK 15 MODE	0:PLAY, 1:MUTE **12-2		1F,00
	bit7	TRACK 16 MODE	0:PLAY, 1:MUTE **12-2		20,00
683	bit0	TRACK 1 MODE	0:PLAY, 1:MUTE **12-2		11,00
	bit1	TRACK 2 MODE	0:PLAY, 1:MUTE **12-2		12,00
	bit2	TRACK 3 MODE	0:PLAY, 1:MUTE **12-2		13,00
	bit3	TRACK 4 MODE	0:PLAY, 1:MUTE **12-2		14,00
	bit4	TRACK 5 MODE	0:PLAY, 1:MUTE **12-2		15,00
	bit5	TRACK 6 MODE	0:PLAY, 1:MUTE **12-2		16,00
	bit6	TRACK 7 MODE	0:PLAY, 1:MUTE **12-2		17,00
	bit7	TRACK 8 MODE	0:PLAY, 1:MUTE **12-2		18,00
684		TRACK 1 NAME (Head)	20~~7F		

## TRITON STUDIO V2 MIDI IMPLEMENTATION

699	:	TRACK 1 NAME (Tail)		----
700	:	TRACK 2~~16 NAME		----
939	:	Same as TRACK 1 NAME (684~~699) (16 * 15 = 240 Bytes)		----
940	:	TR1 EVENT ADRS (MSB)		----
943	:	(4 Bytes) TR1 EVENT ADRS (LSB)		----
944	:	TRACK 2~~16, MASTER TRACK EVENT ADDRESS		----
1007	:	Same as TRACK 1 EVENT (940~~943) (4 * 16 = 64 Bytes)		----
1008	:	(RESERVED)		----
1011	:	(4 Bytes)		----
PATTERN 0				
1012	:	NAME (Head)	20~~7F	----
1027	:	NAME (Tail)	[ASCII CODE]	----
1028	:	LENGTH	01~~63 : 00~~99	----
1029	:	METER	**12-1	----
1030	:	(RESERVED)		----
1031	:	(RESERVED)		----
1032	:	EVENT DATA ADRS(MSB)		----
1035	:	(4 Bytes) EVENT DATA ADRS(LSB)		----
1036	:	PATTERN 1~~99		----
3411	:	Same as PATTERN 0 (1012~~1035) (24 * 99 = 2376 Bytes)		----
3412	:	TRACK9~~16 INT	0:OFF, 1:ON	----
3413	:	TRACK1~~8 INT	0:OFF, 1:ON	----
3414	:	TRACK9~~16 EXT	0:OFF, 1:ON	----
3415	:	TRACK1~~8 EXT	0:OFF, 1:ON	----
TRACK 1 PLAY LOOP				
3416	:	bit7 ASSIGN	0:OFF, 1:ON	----
3416	:	bit6 PLAY INTRO	0:OFF, 1:ON	----
3417	:	b0~~5 START MEASURE (MSB)	01~~3E7 : 001~~999	----
3418	:	START MEASURE (LSB)		----
3419	:	END MEASURE (MSB)	01~~3E7 : 001~~999	----
3420	:	END MEASURE (LSB)		----
3420	:	TRACK 2~~16		----
3479	:	Same as TRACK 1 PLAY LOOP (3416~~3419) (4 * 15 = 60 Bytes)		----
KEY=C-1 RPPR				
3480	:	PATTERN	00~~63 : U00~~U99 00~~95 : P00~~P149	----
3481	:	b0~~3 TRACK	00~~0F : 01~~16	----
3481	:	b4~~7 SYNC	0:Off, 1:Beat, 2:Measure, 3:SEQ	----
3482	:	b0~~3 MODE	0:Once, 1:Manual, 2:Endless	----

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b4~~7	STATUS	0:NOTE,1:PAT,2:SHUTDOWN	----
3483	SHIFT NOTE	F4~~0C : -12~~12	----
3484	KEY=C#-1~~G9 RPPR		
:	Same as KEY=C-1 RPPR (3480~~3483)		----
3991	( 4 * 127 = 508 Bytes)		

\*\*12-1 : 10~~1F : 1/4~~ 16/4  
 20~~2F : 1/8~~ 16/8  
 30~~3F : 1/16~~16/16

\*\*12-2 : On System Exclusive Parameter Change, the Value is 1:PLAY or 2:MUTE.

## SONG SEQUENCE EVENT DATA FORMAT

\* SONG SEQUENCE EVENT DATA's address is showed by each track's EVENT ADDRESS ( 1 SONG SEQUENCE DATA's 940~~1007th,1032~~3411th ). And usually they are located just behind the 1 SONG SEQUENCE DATA.

1st Data	2nd Data	3rd Data	4th Data	5th Data	6th Data	x : Ignored
....	....	....	....	....	.... kkkk	
kkkk : Evetn Data Kind = 1 : Bar at Master Track = 3 : Track End = B : Tempo Change  = 1 : Bar at Track 1~~16 = 2 : Pattern = 3 : Track End = 9 : Note = A : Poly Key Pressure = B : Control Change = C : Program Change = D : After Touch = E : Pitch Bend  = 1 : Bar at Pattern = 3 : Pattern End = 9 : Note = A : Poly Key Pressure = B : Control Change = C : Program Change = D : After Touch = E : Pitch Bend						

## \* NOTE ON/OFF

xxxx	gggg	gggg	gggg	xvvv	vvvv	xkkk	kkkk	tttt	tttt	tttt	1001
Length		Velocity		Key No.		Tick					

ggg : Note length ( From Note On to Note Off )  
 = 000~~BFFH  
 ( = 0C0H : Quarter note )  
 ( = FFFH : Tie to next measure )

vv = 01~~7fH

ttt : Location of Note On ( in the measure )  
 = 000~~BFFH  
 ( = 0C0H : Quarter note )  
 ( = FFFH : Tie from last measure )

## \* PITCH BEND

uppp	pppp	xbbb	bbbb	xPPP	PPPP	xBBB	BBBB	tttt	tttt	tttt	1110
Last Val(H)	Last Val(L)	Value(H)	Value(L)	Tick							
*1								*2			



## \* AFTER TOUCH

xxxx xxxx	xxxx xxxu	xvvv vvvv	xVVV VVVV	tttt tttt	tttt 1101
*1		Last Value	Value	Tick	
				*2	

## \* PROGRAM CHANGE

bbbb bbbb	unnn nnnn	BBBB BBBB	xNNN NNNN	tttt tttt	tttt 1100
Last Bank	Last Prog. No.	Bank	Prog. No.	Tick	
*1				*2	

## \* CONTROL CHANGE

xxxx xxxu	xvvv vvvv	xVVV VVVV	xnnn nnnn	tttt tttt	tttt 1011
*1		Last Value	Value	Control No.	Tick
					*2

## \* POLY KEY PRESSURE

xxxx xxxx	xxxx xxxx	xvvv vvvv	xkkk kkkk	tttt tttt	tttt 1010
		Value	Key No.	Tick	
				*2	

## \* PATTERN ( Insterad of BAR )

xxxx xxxx	xxxx xxxx	xMMM MMMM	nnnn nnnn	xxmm mmmm	mmmm 0010
Pat Measure		Pat No.	Measure No.		
			*3		

M : Measure No. in the Pattern ( 00~~63H : 00~~99 )

n = Pattern No. ( 00~~63 : U00~~U99

64~~F9 : P000~~P149 )

## \* TEMPO CHANGE

xxxx xxxu	vvvv vvvv	VVVV VVVV	0110 1011	tttt tttt	tttt 1011
*1		Last Tempo	Tempo	( Fixed )	Tick
					*2

vv,VV = 28H~~F0H ( 40~~240BPM )

## \* BAR

xxxx xxxx	xxbb bbbb	ssss ssss	ssss ssss	xxmm mmmm	mmmm 0001
Meter		Size	Measure No.		
			*3		

bb = 10~~1F : 1/4~~16/4

20~~2F : 1/8~~16/8

30~~3F : 1/16~~16/16

ss : Event Number in the measure

## \* TRACK/PATTERN END

xxxx xxxx	xxxx xxxx	xxxx xxxx	xxxx xxxx	xxmm mmmm	mmmm 0011
					Measure No.
					*3

\*1 : u = 0 : Use [ Last value ] for last value

u = 1 : Last value is unfixed

Last value is used when Rewind & Location is decreased.

\*2 : ttt : Location of Event ( in the measure )

= 000~~BFFH

( = 0C0H : Quarter note )

\*3 : mmm : Measure No. in the Track ( 000~~3E7H = 000~~999 )

[ TABLE 13 ] 1 SONG EXTENDED SEQUENCE DATA 2003.04.11

No. (bit)	PARAMETER	DATA(Hex) : VALUE	DESCRIPTION	PARA No.
TRACK 1 TONE ADJUST PARAMETER				
TRACK 1 TONE ADJUST PARAMETER 1				
0	DESTINATION	00~~18 : **13-1		21,00
1	( RESERVED )			----
2	ADJUST VALUE (MSB)	**13-2		21,01
3	ADJUST VALUE (LSB)			
04 : 23	TRACK 1 TONE ADJUST PARAMETER 2~~6 Same as TONE ADJUST PARAMETER 1 (4568~~4571) ( 4 * 5 = 20 Bytes)			21,02 : 21,0B
24 : 384	TRACK 2~~16 TONE ADJUST PARAMETER Same as TRACK 1 TONE ADJUST PARAMETER (4568~~4591) ( 24 * 15 = 360 Bytes)			22,00 : 30,0B
AUDIO TRACK FILE PATHNAME				
384 : 363	Setting 0 to [384], and treating as "No Assign". FILE PATHNAME string must be scripted within 80 charactors. FILE PATHNAME string must be terminated with 0.			----
AUDIO TRACK PARAMETER				
AUDIO TRACK 1 PARAMETER				
464	VOLUME	00~~7F : 00~~127		40,01
465	PAN	00~~7F : L000~~R127		40,00
466	SEND 1 LEVEL	00~~7F : 00~~127		40,03
467	SEND 2 LEVEL	00~~7F : 00~~127		40,04
468	BUS SELECT	00:L/R,01~~05:IFX1~~5,06~~09:1~~4,0A:1/2,0B:3/4,0C:Off		40,02
469	TRACK MODE	1:PLAY, 2:MUTE		40,05
470	( RESERVED )			----
471	( RESERVED )			----
472 : 479	AUDIO TRACK 2 PARAMETER Same as AUDIO TRACK 1 PARAMETER (464~~471) ( 8 Bytes)			41,00 : 41,05
AUDIO TRACK CONTROL PARAMETER				
480	AUDIO TRACK SELECT	00:NONE(USE TRACK01~16), 01~03:AUDIO TRACK 1, 2, 1&2		----
481 : 483	( RESERVED ) : ( 3 Bytes) :			----

\*\*13-1 :

0 : LPF Fc	(LPF Cutoff)	1 : Reso HPF	(Resonance/HPF Cutoff)
2 : F EG Int	(Filter EG Intensity)	3 : Amp Vel I	(Amp Velocity Intensity)
4 : F/A EG A	(Filter/Amp EG Attack)	5 : F/A EG D	(Filter/Amp EG Decay)
6 : F/A EG S	(Filter/Amp EG Sustain)	7 : F/A EG R	(Filter/Amp EG Release)
8 : Filtr EG A	(Filter EG Attack)	9 : Filtr EG D	(Filter EG Decay)
A : Filtr EG S	(Filter EG Sustain)	B : Filtr EG R	(Filter EG Release)
C : Amp EG A	(Amp EG Attack)	D : Amp EG D	(Amp EG Decay)
E : Amp EG S	(Amp EG Sustain)	F : Amp EG R	(Amp EG Release)
10 : LFO Spd	(LFO1 Speed)	11 : LFO P Int	(LFO1 Pitch Intensity)
12 : LFO Fade	(LFO1 Fade)	13 : LFO Dly	(LFO1 Delay)
14 : Ptch Str.	(Pitch Stretch)	15 : Dtun 1	(Detune 1)
16 : Dtun 2	(Detune 2)	17 : Hold	(Hold)

18 : Rev (Reverse)

\*\*13-2 :

[DESTINATION : 0~~F, 12~~13]	FF9D~~0063 : -99~~99
[DESTINATION : 10]	FF39~~00C7 : -199~~199
[DESTINATION : 11]	FB50~~04B0 : -12.00~~12.00 (0.1 STEP)
[DESTINATION : 14]	F4~~0C : -12~~12
[DESTINATION : 15~~16]	FB50~~04B0 : -1200~~1200
[DESTINATION : 17~~18]	FF : 0FF, 0 : PRG, 1 : ON

[ TABLE 14 ] SONG EXCLUSIVE EVENT DATA

2003.04.11

Offset No.	Offset No.	Offset No.	Offset No.	
Exclusive Event Data Chunk Header (12 Bytes) [ TABLE 14-a ]				
00~03	"EXCL" : 45, 58, 43, 4C (Hex)			
04	00 (Hex)			
05~07	Number Of Exclusive Event Units			
08~11	ALL CHUNK SIZE			
Song Chunk #1				
Song Chunk Header (12 Bytes) [ TABLE 14-a ]				
00~03	"SNG1" : 53, 4E, 47, 31 (Hex)			
04	Song No. ***14-a-1			
05~07	Number Of Exclusive Event Units			
08~11	SONG CHUNK SIZE			
Track Chunk #1				
Track Chunk Header (12 Bytes) [ TABLE 14-a ]				
00~03	"TRK1" : 54, 52, 4B, 31 (Hex)			
04	Track No.			
05~07	Number Of Exclusive Event Units			
08~11	TRACK CHUNK SIZE			
Exclusive Data #1				
Exclusive Data Header (6 Bytes) [ TABLE 14-b ]				
00~01	Measure			
02~03	Location			
04~05	Number Of Exclusive Event Units			
Excusive Event Data				
06~11	Event Start Unit (6Bytes)			**14-1
12~17	Event Data Unit #1 (6Bytes)			**14-2
:	:	:	:	:
6+(n*6)~11+(n*6)	Event Data Unit #n			
12+(n*6)~17+(n*6)	Event End Unit (6Bytes)			**14-3
Exclusive Data #e				
:	:	:	:	:
Track Chunk #t				
:	:	:	:	:
Pattern Chunk #1				

			Pattern Chunk Header [ TABLE 14-a ]	
			00~03	"PAT1" : 50, 41, 54, 31 (Hex)
			04	Pattern No.
			05~07	Number Of Exclusive Event Units
			08~11	PATTERN CHUNK SIZE
				Exclusive Data #1
:	:	:	:	:
				Exclusive Data #n
:	:	:	:	:
				Pattern Chunk #p
:	:	:		
				Song Chunk #s
:	:			

x : Ignored

## \*\*14-1 Exclusive Start Event

xxxx xxxx	xxxx xxxx	uvvv vvvv	UVVV VVVV	tttt tttt	tttt 1111
Last Val(H) Last Val(L)			Tick		

u = 0 : Use [ Last value ] for last value

u = 1 : Last value is unfixed

Last value is used when Rewind &amp; Location is decreased.

U = 0 : This event isn't Parameter Change for Sequencer.

U = 1 : This event is Parameter Change for Sequencer.

ttt : Location of Event ( in the measure )

= 000~BFFH

( = 0C0H : Quarter note )

## \*\*14-2 Exclusive Data Event

dddd dddd	dddd dddd	dddd dddd	dddd dddd	dddd dddd	xxxx 0111
Data					

## \*\*14-3 Exclusive End Event

xxxx xxxx	xxxx xxxx	xxxx xxxx	xxxx xxxx	xxxx xxxx	xxxx 1000
-----------	-----------	-----------	-----------	-----------	-----------

[ TABLE 14-a ] SONG Chunk Headers In SONG EXCLUSIVE EVENT DATA

00~03	Chunk Name	(4bytes)
04	Chunk Number	(1byte)
05~07	Number Of Exclusive Event Units	(3bytes)
08~11	Data Size	(4bytes)

Total : 12bytes

Every CHUNK HEADER in SONG EXCLUSIVE EVENT DATA is shown by this format.

Each CHUNK has a layered structure and is described by in the form of the following.

Chunk Name : "EXCL", Top Level of a layer.

"SNG1", 2nd Level.

"TRK1" 3rd Level.

"PAT1" 3rd Level.

Chunk Number : "EXCL" : Always 0.

"SNG1" : Song Number from First Song as "0". \*\*\*14-a-1

"TRK1" : Track Number of the song.

"PAT1" : User Pattern Number of the song.

Number Of Exclusive Event Units : Contains Number Of Exclusive Event Units In this Chunk.  
(Equals Sum of "Number Of Exclusive Event Units"[ TABLE 14-b ])

Data Size : Size of Data(Bytes) of this Chunk.(except this header)

\*\*\*14-a-1 NOT the Number of Song in Sequencer Mode. For example, When "005:New Song" is the 1st song and "014:New Song2" is the 2nd in Sequencer Mode, Chunk Number "0" is assigned to "005:New Song", and "1" is assigned to "014:New Song2".

[ TABLE 14-b ] Exclusive Data Header

00~01	Measure	(2bytes)
02~03	Location	(2bytes)
04~05	Number Of Exclusive Event Units	(2bytes)
Total : 6bytes		

Every extracted EXCLUSIVE EVENT DATA UNIT(From Start to End) has this Header in order to put on the exact position of SEQUENCE DATA.

Measure : Measure Number in which this Unit(\*\*14-b-1) existed.

Location : Location Number from "Bar Event"(\*\*14-b-1).

Number Of Exclusive Event Units : include Start and End Unit

\*\*14-b-1 Location of Exclusive Data shows the place of Exclusive Start Event Unit.

[ TABLE 15 ] SEQUENCER SOLO SELECTED TRACK PARAMETER

2003.04.11

PARAMETER	DATA(Hex) : VALUE	DESCRIPTION	PARA No.
TRACK 1 SOLO	0:OFF, 1:ON		11,01
TRACK 2 SOLO	0:OFF, 1:ON		12,01
TRACK 3 SOLO	0:OFF, 1:ON		13,01
TRACK 4 SOLO	0:OFF, 1:ON		14,01
TRACK 5 SOLO	0:OFF, 1:ON		15,01
TRACK 6 SOLO	0:OFF, 1:ON		16,01
TRACK 7 SOLO	0:OFF, 1:ON		17,01
TRACK 8 SOLO	0:OFF, 1:ON		18,01
TRACK 9 SOLO	0:OFF, 1:ON		19,01
TRACK 10 SOLO	0:OFF, 1:ON		1A,01
TRACK 11 SOLO	0:OFF, 1:ON		1B,01
TRACK 12 SOLO	0:OFF, 1:ON		1C,01
TRACK 13 SOLO	0:OFF, 1:ON		1D,01
TRACK 14 SOLO	0:OFF, 1:ON		1E,01
TRACK 15 SOLO	0:OFF, 1:ON		1F,01
TRACK 16 SOLO	0:OFF, 1:ON		20,01
AUDIO TRACK 1 SOLO	0:OFF, 1:ON		40,06
AUDIO TRACK 2 SOLO	0:OFF, 1:ON		41,06

## TRITON STUDIO V2 MIDI IMPLEMENTATION

### -Revision History-

Rev	Date	Description
1.0	Jan.24.'02	Initial Release.
1.1	Jan.24.'02	Corrected the comment of "(13) CURRENT PROGRAM PARAMETER DUMP".
1.2	Jan.25.'02	Change "COMMON PARAMETERS"(Table 12) size.
1.3	Jan.29.'02	Change "GLOBAL PARAMETERS"(Table 4).
1.4	Jan.30.'02	Change "ARPEGGIATOR PATTERN No." (Table1,3,5,6,9).
1.5	Feb.19.'02	ADD "PARA No." in "1 SONG SEQUENCE DATA"(Table 12).
1.6	Feb.20.'02	Modified that it is Parameter,Message,and so on in detail.
1.7	Mar.07.'02	Fix some mistakes. Add the explanation of the order of Drum kit (**1-9).
1.8	Jun.17.'02	Fix some mistakes.
1.9	Aug.01.'02	Fix some mistakes.
2.0	Apr.25.'03	Supported TRITON STUDIO System version 2. New: System Exclusive Message Function Code: 7E. New: System Exclusive Message Function Code: 7F. Changed: "SONG CONTROL DATA/TRACK nn MODE" in [ TABLE 12 ] applied to Parameter Change. New: [ TABLE 13 ] 1 SONG EXTENDED SEQUENCE DATA, New: [ TABLE 14 ] SONG EXCLUSIVE EVENT DATA. New: [ TABLE 15 ] "SEQUENCER SOLO SELECTED TRACK PARAMETER" applied to Parameter Change.
2.1	May.13.'03	Fixed some mistakes. System version 2.0.0 Release